



**PROJECT MANUAL
VOLUME I OF I**

CITY HALL - RE-ROOFING

CITY HALL

501 PALM AVE
HIALEAH, FLORIDA 33010

OWNER

CITY OF HIALEAH
501 PALM AVENUE
HIALEAH, FLORIDA

ARCHITECT

N/A

CONSULTANTS

Sika Corporation
3483 Satellite Boulevard
Duluth, GA 30096
Phone: (770) 495-0025
Fax: (770) 495-0027
Robert Ganues
ganues.robert@us.sika.com

STRUCTURAL ENGINEER
N/A

CIVIL ENGINEER
N/A

CITY HALL RE-ROOFING



CITY HALL

RE-ROOFING

TABLE OF CONTENTS

	Pages
ADVERTISEMENT & INVITATION FOR BIDS	3
CITY OF HIALEAH INVITATION TO BID TERM CONTRACT	4-6
INSTRUCTION TO BIDDERS	7
GENERAL TERMS AND CONDITION OF INVITATION TO BID	8-9
BIDDERS INFORMATION	10
GENERAL CONDITIONS	11-17
SUMMARY OF WORK	18
ROOFING SPECIFICATIONS	19-42
PROPOSAL	43
INSURANCE REQUIREMENTS	44
ENDORSEMENTS	45-49
INSURANCE CHECKLIST	50-51
ASSIGNMENT	52
STATEMENT OF BIDDER'S QUALIFICATIONS	53-54
NONCOLLUSION AFFIDAVIT OF PRIME BIDDER	55
DISCLOSURE AFFIDAVIT	56
SWORN STATEMENT ON PUBLIC ENTITY CRIMES	57-58

CITY OF HIALEAH
ADVERTISEMENT & INVITATION FOR BIDS

The City Clerk of the City of Hialeah, Florida, will receive sealed bids for the project entitled: **CITY HALL-RE-ROOFING**, until **11:00 a.m. on Tuesday, January 26, 2016**, at the Hialeah City Hall, 501 Palm Avenue, Third Floor, Council Chambers, Hialeah, Florida, at which time all bids will be publicly opened and read aloud.

CITY HALL
RE-ROOFING
BID #2015/16-3230-00-009

Contract documents, including drawings, technical specifications and proposal forms may be obtained from the Purchasing Department, located at City Hall, 501 Palm Avenue, Fourth Floor, Hialeah, Florida, or by calling 305-883-5846. Drawings may also be examined at the Construction and Maintenance Design Center, 900 East 56 Street, Hialeah.

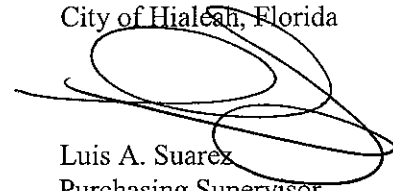
Bids shall be submitted in sealed envelopes and shall bear on the face, thereof, the bid number and the complete name and address of the bidder. Bids are to be based strictly upon contract documents and instructions herein with no deviations or alternates being considered at bid time, other than those specific requests on the proposal sheets.

Bid bond will be required. The bid surety will be in the amount of 5% of the bid or you may submit a certified check or bank draft payable to the City of Hialeah. Should the contractor fail to submit the bid bond, the bid will automatically be forfeited. **If the contract amount exceeds \$ 200,000.00, Performance and Payment Bonds will be required** and should be in the amount of the contract, and must be submitted prior to the Notice to Proceed.

The City of Hialeah reserves the right to reject any and all bids, or to waive any informality in the bidding. Bids may be held by the City of Hialeah for a period not to exceed sixty (60) days from the date of opening for the purpose of reviewing the bids and investigating the qualifications of the bidders, prior to awarding of the contract.

The City of Hialeah reserves the right to accept or reject bids on each item separately or as a whole.

City of Hialeah, Florida



Luis A. Suarez
Purchasing Supervisor

Advertisement Date:
Wednesday, December 16, 2015

SUBMIT BIDS TO:		CITY COUNCIL CITY OF HIALEAH 501 PALM AVENUE HIALEAH, FL 33010		CITY OF HIALEAH INVITATION TO BID TERM CONTRACT Bidder Acknowledgment	
Page 1 of 3	Telephone Number	Mailing Date	Bid No.		
	(305) 883-5857	December 16, 2015	2015-16-3230-00-009		
Bid will be opened: January 26, 2016 And may not be withdrawn within 30 DAYS after such date and time 11:00 A.M.		Bid Title City Hall- Re-Roofing			
All awards made as a result of this bid shall conform to applicable Florida Statutes and City of Hialeah Charter and Ordinances			Reason for "no bid"		
NAME OF VENDOR		AREA CODE	TELEPHONE NUMBER		
MAILING ADDRESS		BUSINESS ADDRESS			
CITY - STATE - ZIP CODE		WHEN REQUIRED, BOND OR CASHIER'S OR CERTIFIED CHECK IS ATTACHED IN THE AMOUNT OF \$ _____			
I certify that this bid is made without prior understanding agreement, or connection with any corporation, firm or person submitting a bid for the same materials, supplies, or equipment, and is in all respects fair and with-out collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder.					
		_____ AUTHORIZED SIGNATURE (MANUAL)			
		_____ AUTHORIZED SIGNATURE (TYPED) TITLE			

GENERAL CONDITIONS

BIDDER: To insure acceptance of the bid, follow these instructions.

SEALED BIDS: All bid sheets and this form must be executed and submitted in a sealed envelope. (Do not include more than one bid per envelope) The face of the envelope shall contain, in addition the above address, the date and time of bid opening and the bid title. Bids not submitted on attached bid form shall be rejected. All bids are subject to the conditions specified herein. Those which do not comply with these conditions are subject to rejection.

- 1. EXECUTION OF BID:** Bid must contain a manual signature of authorize representative in the space provided above the company name and bid title must also appear on each page of the bid as required.
- 2. NO BID:** If not submitting a bid, respond by returning this form, marking it "No Bid", and explain the reason in the space provided above. Repeated failure to quote, without sufficient justification, shall be cause for removal of the supplier's name from the bid mailing list. Note: To qualify as a respondent, bidder must submit a "No Bid" and it must be received no later than the stated bid opening date and hour.
- 3. BID OPENING:** Shall be at a public opening commencing at the regular time and date specified on the bid form. It is the bidder's responsibility to assure that his bid is delivered at the proper time and place of the bid opening. Bids which for any reason are not so delivered will not be considered. Offers by telegram or telephone are not acceptable. Bid files may be examined during normal working hours by appointment.
- 4. PROOF OF CAPABILITY:** The bidder may be required before the award of any contract, to show to the complete satisfaction of the City Council that he has the necessary facilities, ability and financial resources to perform the bid requirements in a satisfactory manner and he may be required to show past history and references which will enable the City Council to satisfy itself as to his qualifications
- 5. PATENTS AND ROYALTIES:** The bidder, without exception, shall indemnify and save harmless the City of Hialeah and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process or article manufactured or used in the performance of the contract, including its use by the City of Hialeah, Florida. If the bidder uses any design, device, or materials covered, by letter, patent or copyright, if is mutually agreed and understood without exception that the bid prices shall include all royalties or cost arising from the use of such design, device, or materials, in any way involved in the work.
- 6. RATE OF WAGES:** When applicable, the rate of wages for work covered by a public contract for those employed by any contractor or subcontractor, shall not be less than the prevailing rate of wages for similar skills or classifications or work in the City of Hialeah. The Division of Labor and Employment Opportunities, Tallahassee, Florida, will furnish the prevailing wage rates in the City of Hialeah, upon request.

7. **PRICES TERMS AND PAYMENT:** Firm prices shall be quoted: typed or printed in ink and include all packing, handling and shipping charges, unless otherwise stipulated. Bidder is requested to offer a cash discount for prompt invoice payment. Discount time will be computed from the date of satisfactory delivery at place of acceptance or from receipt of correct invoice at the office specified, whichever is later.
- (a) **TAXES:** A bidder or proposer shall include all applicable taxes in its bid or proposal. A bidder or proposer will not be excused from payment of state sales or transportation taxes or other applicable taxes, unless the bid form specifically provides for an option for a bidder or proposer to claim a tax exemption. A bidder or proposer shall not base a bid or proposal price on an assumption that that the City will utilize its tax exemption to purchase or order materials, equipment, etc. Any tax liability or tax payment resulting from any determination or interpretation of any law, rule, regulation or opinion is the sole responsibility of the bidder or proposer.
- (b) **DISCOUNTS:** Bidders may offer a cash discount for prompt payment: however, such discounts shall not be considered in determining the lowest net cost for bid evaluation purposes. Bidders are encouraged to reflect cash discounts in the unit prices quoted.
- (c) **MISTAKES:** Bidders are expected to examine the specifications, delivery schedule, bid prices, and all instructions pertaining to supplies and/or services. Failure to do so will be at bidder's risk. In case of mistake in extension, the unit price will govern.
- (d) **CONDITION AND PACKAGING:** It is understood and agreed that any item offered or shipped as a result of this bid shall be new (current model at the time of this bid). All containers, where applicable, shall be suitable for storage or shipment and all prices shall include standard commercial packaging.
- (e) **SHIPPING CHARGES:** When items are to be delivered or shipped to the City of Hialeah, bid shall reflect that these items are F.O.B. destination.
- (f) **SAFETY STANDARDS:** Unless otherwise stipulated in the bid, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act and any standards there under.
- (g) **INVOICING AND PAYMENT:** The contractor shall be paid upon submission of a properly certified invoice to the ordering agency at the prices stipulated on the contract at the time the order is placed, after delivery and acceptance of the goods. Contractor(s) shall insure that the invoice is legible, submitted with the correct price(s) and include the purchase order number.
8. **MANUFACTURES' NAMES AND APPROVED EQUIVALENTS:** Any manufacturers' names, trade names, brand names, information and/or catalog numbers listed in a specification are for information, not to limit competition. The bidder may offer any brand for which he is an authorized representative, which meets or exceeds the specification for any item(s). If bids are based on equivalent products, indicate on the bid form the manufacturer's name and number and indicate any deviation from the specifications. **YOUR BID, LACKING ANY WRITTEN INDICATION OF INTENT TO QUOTE AN ALTERNATE BRAND, WILL BE RECEIVED AND CONSIDERED AS A QUOTATION IN COMPLETE COMPLIANCE WITH THE SPECIFICATIONS.**
9. **AWARDS** As the best interest of the City may require the right is reserved to make award(s) by individual item, groups of items, all or none, or a combination thereof, to reject any and all bids or waive any minor informality or technicality in bids received
10. **INFORMATION AND DESCRIPTIVE LITERATURE:** Bidders must furnish all information requested in the spaces provided on the bid form. Further as may be specified elsewhere, each bidder must submit with his proposal cuts, sketches, and descriptive literature and/or complete specifications covering the products offered. Reference to literature submitted with these requirements are subject to rejection.
11. **INTERPRETATIONS:** Any questions concerning conditions and specifications shall be directed in writing to this office for receipt no later than ten (10) days prior to the bid opening. Inquiries must reference the date of bid opening and title. Failure to comply with this condition will result in bidder waiving his right to dispute the bid specifications.
12. **SERVICE AND WARRANTY:** Unless otherwise specified, the bidder shall define any warranty service and replacements that will be provided during and subsequent to this contract. Bidders must explain on an attached sheet to what extent warranty and service facilities are provided.
13. **SAMPLES:** Samples of items, when called for must be furnished free of expense, and if not destroyed may, upon request, be returned at the bidder's expense. Each individual sample must be labeled with bidders name, manufacturer's brand name and number, bid title and item reference. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received within ninety (90) days after bid opening date. If instructions are not received within this time, the commodities shall be disposed of by the City of Hialeah.
14. **NONCONFORMANCE TO CONTRACT CONDITIONS:** Items delivered not conforming to specifications may be rejected and returned at vendor's expense. These items and items not delivered as per delivery date (s) in bid, purchase order or specifications may result in bidder being found in default in which event any and all re-procurement costs may be charged against the defaulting contractor. Any violation of these stipulations may also result in:
 - (a) Supplier's name being removed from the City's vendor mailing list.
 - (b) All City departments being advised not to do business with the supplier without written approval from City Purchasing.
15. **INSPECTION ACCEPTANCE AND TITLE:** Inspection and acceptance will be at destination unless otherwise provided. Title and risk of loss or damage to all items shall be the responsibility of the contract supplier until accepted by the ordering department of the City, unless loss or damage results from negligence by the City.
16. **RESTRICTIONS:** In the event any restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the item(s) or services offered on this proposal prior to their delivery, it shall be the responsibility of the supplier to notify City Purchasing at once, indicating in his letter the specific regulation which requires an alteration. The City reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no expense to the City
17. **PRICE ADJUSTMENTS:** Any price decrease effectuated during the contract period either by reason of market change or on the part of the contractor to other customers shall be passed on to the City of Hialeah.
18. **CANCELLATION:** All contract obligations shall prevail until the end of each City fiscal year, September 30th. For the protection of both parties, this contract may be canceled in whole or in part by either party by giving thirty (30) days prior notice in writing to the other party.

19. **ABNORMAL QUANTITIES:** While it is not anticipated, should any unusual or abnormal quantity requirements arise, the City reserves the right to solicit separate bids thereon. Such bids shall be solicited only upon prior approval of City Purchasing.
20. **EXTENTION:** The City reserves the option to extend the period of this contract or any portion thereof, for an additional contract period. Extension of the contract period shall be by mutual agreement in writing.
21. **ADVERTISING:** In submitting a proposal, bidder agrees not to use the results there from as a part of any commercial advertising.
22. **SUMMARY OF TOTAL SALES:** The bidder agrees to furnish City Purchasing a summary of sales, including total dollar amount, made under the contract at the end of each quarter, or as stipulated in the attached special conditions. Written justification must be submitted with this bid if this requirement cannot be met.
23. **LIABILITY:** The supplier shall hold and save the City of Hialeah, its officers, agents, and employees harmless from liability of any kind in the performance of this contract.
24. **EQUAL EMPLOYMENT OPPORTUNITY:** The City of Hialeah endorses Equal Employment and incorporates the non-discrimination clause in this invitation to Bid, General Conditions.
25. **SPECIFICATION SILENCE:** Apparent silence on the specifications as to any details, or the apparent omission from it of a detailed description concerning any point, shall be regarded as meaning only the best commercial practices will prevail and that only materials and workmanship of first quality are to be provided. All interpretation of the Specifications shall be made upon this statement.
26. **CONDUCT OF OPERATIONS:** If providing maintenance service, the contractor shall conduct its operation in an orderly and proper manner so as not to unreasonably annoy, disturb, endanger or be offensive to the public; keep the sound level of its operation as low as practicable; and within reason, control the conduct and appearance of its employees, invitees and of those doing business with it. Upon objection from the City concerning conduct, demeanor and appearance of any persons, the contractor shall immediately take all reasonable steps to remove the cause of the objection.
27. **ASSIGNMENT OF ANTI-TRUST CLAIMS TO CITY:** Bidders who are dealers, distributors, etc. and who are offering commodities manufactured by others shall complete the attached assignment form and return it with their bid. Failure to agree to this assignment shall subject the bid to rejection.

NOTE: THE GENERAL CONDITIONS, AS ITEMIZED, AND THE ACCOMPANYING BID CONSTITUTE AN OFFER FROM THE BIDDER. IF ANY OR ALL PARTS OF THE BID ARE ACCEPTED BY THE CITY OF HIALEAH, AN AUTHORIZED REPRESENTATIVE OF THE CITY SHALL AFFIX HIS SIGNATURE HERETO, AND THIS SHALL THEN CONSTITUTE THE WRITTEN AGREEMENT BETWEEN THE PARTIES. THE CONDITIONS OF THIS FORM BECOME A PART OF THE WRITTEN AGREEMENT BETWEEN THE PARTIES, AND THE CITY HEREBY RELIES UPON ANY REPRESENTATIONS BY THE BIDDER AS ARE CONTAINED HEREIN.

CITY OF HIALEAH

CONTRACT/PURCHASE ORDER NUMBER

BID NO: _____

BY: _____

BID TITLE: _____

DATE: _____

EFFECTIVE: _____

INSTRUCTIONS TO BIDDERS

SEALED BID MAILING ADDRESS

Each bid returned to this office must have clearly marked on the face of the envelope the following information:

- | | |
|-----------------------------------|------------------------------|
| 1. Sealed Bid Number | 3. Title of the Bid |
| 2. Opening Date of the Bid | 4. Bidder's Firm Name |

****THE ENCLOSED BID RETURN ENVELOPE SHOULD BE USED WHENEVER POSSIBLE. BID NOT COMPLYING WITH THE ABOVE INSTRUCTIONS WILL NOT BE CONSIDERED.**

The forms listed below, included with documents from the City of Hialeah, must be completed and submitted along with the **Proposal** on the bid due date:

**ASSIGNMENT
BID BOND
INVITATION TO BID/ TERM CONTRACT
DISCLOSURE AFFIDAVIT
NON COLLUSION AFFIDAVIT
STATEMENT OF BIDDER'S QUALIFICATIONS
SWORN STATEMENT ON PUBLIC ENTITY CRIMES**

The Bidder must furnish a statement giving a complete description of all points wherein the equipment he proposed to furnish does not comply with the specifications. Failure to furnish such a statement will be interpreted to mean that the vendor agrees to meet all requirements of the specifications.

Bidder will state delivery time in his proposal. Also, Bidder will include in the proposal form, days required to complete each stage of work.

All quotations and proposal must be signed and all appropriate spaces with the Firm name and by an officer of employee having authority to bind the Company or Firm by his signature.

To be retained on the Active Bidders list, bidder **MUST** respond to this Invitation to Bid. To protect your status as an active bidder, please complete and return the Bidder's Acknowledgment Form of the bid proposal indicating reason for "NO BID" at this time. Failure to respond to bid invitations could result in automatic removal from the bidder's list.

The City of Hialeah reserves the right to accept or reject bids on each item separately, or as a whole.

GENERAL TERMS AND CONDITIONS OF INVITATION TO BID

CONTENTS OF BID

A. GENERAL CONDITIONS

Bidders are required to submit their proposals in conjunction with the following express conditions:

1. Bidders shall thoroughly examine the drawings, specifications, schedules, instructions and all other contract documents.
2. Bidders shall make all investigations necessary to thoroughly inform themselves regarding plant and facilities for delivery of material and equipment as required by the bid conditions. No plea of ignorance by the bidder of conditions that exist or that may hereafter exist as a result of failure or omission on the part of the bidder to make the necessary examinations and investigations, or failure to fulfill in every detail the requirements of the contract documents will be accepted as a basis for varying the requirements of the City, or the compensation to the vendor.
3. Bidders are advised that all City contracts are subject to all legal requirements provided for in City Ordinances, the Purchasing Ordinance, and/or State and Federal Statutes.

B. DESCRIPTION OF SUPPLIES

1. Any manufacture's names, trade names, brand names, or catalog numbers used in these specifications are for the sole purpose of describing and establishing minimum requirements or level of quality, standards of performance, and design required, and is in no way intended to prohibit the bidding of other manufacturers' items of equal quality.
2. Bidders are required to state exactly what they intend to furnish. Otherwise they shall be required to furnish the items as specified.
3. When bidding an approval equal, bidders will submit with their proposal, two (2) complete sets of necessary data (factory information sheets, specification, brochures, etc.) in order for the City of Hialeah to evaluate and determine the quality of the bid item(s).
4. Bidders must indicate any variances to the Specifications, Terms and Conditions, no matter how slight.
5. The City of Hialeah shall be the sole judge of equality and its decision shall be final.

C. VARIANCES IN TERMS AND CONDITIONS

Where there appears to be variances or conflicts between these General Terms and Conditions and the "Special Conditions" outlined in the Bid Package, Special Conditions in the Bid Package shall prevail.

D. CLARIFICATION AND ADDENDA TO BID SPECIFICATIONS

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of the specification or other bid documents or any part thereof, the bidder may submit to the Purchasing Agent on or before the (10) days prior to scheduled bid opening request for clarification. All such requests for clarification shall be made in writing, and the person submitting the request will be responsible for its prompt delivery. Any interpretation of the bid, if made, will be made only by Addendum duly issued by the City of Hialeah. A copy of such Addendum will be mailed to each bidder receiving an invitation to Bid. The bidder, in turn, shall acknowledge receipt of the Addendum by signing the Addendum and including it in the Bid Proposal. The City will not be responsible for any other explanation or interpretation of the proposed bid made or given prior to the award of the contract.

- E.** Any manufacturers names, trade names, brand names, information and/or catalog numbers listed in a specification are for information, not to limit competition. The bidder may offer any brand for which he is an authorized representative, which meets or exceeds the specification(s) for any item. If bids are based on equivalent products, indicate any deviations from the specifications. Your bid, lacking any written indication of intent to quote an alternate brand, will be received and considered as a quotation in complete compliance with the specifications.

CITY OF HIALEAH

CITY HALL RE-ROOFING

BIDDERS INFORMATION

PROJECT DESCRIPTION:

The City of Hialeah Construction and Maintenance Department is proposing to re-roof the City Hall building located at 501 Palm Avenue. The project will consist of the removal of the existing roof and installation of a new Miami Dade County approved roofing system.

BUDGET:

The budget for the project is \$125,000.00

PROJECT DURATION:

This Project is estimated to have a total duration of approximately 60 calendar days, beginning February 2016. Contractor needs to supply sufficient manpower to adhere to the City's construction schedule, and be ready to commence work as soon as the project is awarded and a notice to proceed is issued by the City.

AWARDING OF BIDS:

The City of Hialeah may use the following criteria in awarding bids:
80% Price, 10% Experience, 10% Manpower and Capability to Perform Job

The City, at its sole discretion, may conduct an oral interview for the top 3 ranked bidders. If an oral interview is granted, bonus points will be given up to 5% based on the results of the interview.

Trades Awarded– Roofing

CITY OF HIALEAH

CITY HALL

RE-ROOFING

PART 1 GENERAL

1.01 DESCRIPTION

PROJECT DESCRIPTION

The City of Hialeah Construction and Maintenance Department is proposing to re-roof the City Hall building located at 501 Palm Avenue. The project will consist of the removal of the existing roofing system and the installation of a new Miami Dade County approved roofing system as per attached specifications.

1.02 CONTACT INFORMATION

City of Hialeah
Vicente Rodriguez – Director
Construction & Maintenance Dept.
Phone (305) 687-2620
Fax (305) 687-2642

In order to assure a response, all questions must be in writing and submitted no later than end of business on **Tuesday, January 12, 2016**. Questions shall be submitted via fax or e-mail to vrodriguez@hialeahfl.gov.

A mandatory pre-bid meeting will be held at City Hall, 501 Palm Ave., on Tuesday, January 5th, 2016 at 10:00 a.m. All bidders are to meet at the 1st floor lobby

1.03 OMISSIONS

- A. The apparent silence of the specification and any addendum regarding any details or the omission from the specification of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail, and that only materials and workmanship of first quality are to be used. All interpretations of this specification shall be made upon the basis of this agreement.
- B. All items not specifically mentioned in Specifications or noted on the Drawings but which are obviously necessary to make a complete working installation shall be included.

- C. The contractor, as an expert in his profession, must carefully review the plans and bring forth any discrepancies, omissions, deletions and items not in accordance to the building code which may cause change orders, before the bid due date.

1.04 SUBSTITUTIONS

- A. Where equipment and materials are specified or designated on drawings by trade names and catalog numbers, the intent is to establish a standard of quality, appearance, performance and dimension. Materials and equipment of other manufacturers will be considered, provided they are equals in all respects to that specified; however, it will be the Contractor's responsibility to demonstrate equality of substitution with materials or equipment specified by the Architect/Engineer.
- B. If any departures from the contract drawings are deemed necessary by the Contractor, details of such departures and reasons thereof shall be submitted to the Owner for review and approval **10 calendar days before the bid due date**. No such departures shall be made without the prior written approval of the Owner.

1.05 LICENSE, PERMITS AND FEES:

The bidder shall obtain and pay for all licenses, permits and inspection fees required for this project; and shall comply with all laws, ordinances, regulations and building code requirements applicable to the work contemplated herein. Damages, penalties and or fines imposed on the City or the bidder for failure to obtain required licenses; permits or fines shall be borne by the bidder.

1.06 INSURANCE

- A. Refer to bid documents.
- B. Contractor shall submit a certificate of insurance, before commencing work, naming the City as an additional insured.

1.07 WORK PROGRESS

- A. The contractor shall not enter the City's work premises nor commence any work until a "Purchase Order" and "Notice to Proceed" have been issued.
- B. The workday shall start at 7:00 a.m. and end no later than 5:00 p.m. Any deviations from this schedule must be pre-approved by the Construction Supervisor.
- C. Contractor to begin each stage of the work as requested by the Construction Supervisor. The minimum notice to begin shall be forty-eight (48) hours.

- D. Contractor to complete each stage of the work within the time stipulated on the proposal sheet or as agreed to with the Construction Supervisor.
- E. Contractor must provide sufficient manpower to assure that their work complements an overall schedule. The duration for this project is estimated at 9 months.

1.08 SUPERVISION AND SKILLED WORKMEN

- A. A company regularly engaged in this type of work shall install all work. Experienced and qualified personnel shall perform the work.
- B. The Contractor shall place a competent superintendent on the job at commencement of work and he shall keep the same superintendent, foreman and key workmen throughout the job as long as possible.

1.09 DISCLOSURE

Contractor will submit a list of all subcontractors and material suppliers delivering to the job site together with the first payment request.

1.10 PRICES

- A. Prices proposed by the Contractor shall remain firm during the contract.
- B. The Contractor shall submit a lump sum price.

1.11 PAYMENTS

- A. Contractor shall submit invoices showing the City assigned purchase order number for this contract.
- B. Partial payment shall be made based on actual work completed less ten percent (10%) for retainage after approval by the Construction Supervisor. Partial "Release of Liens" must be submitted together with requests for partial payments.
- C. Final payment shall be made after all the following have been completed:
 - 1. Satisfactory completion of all work.
 - 2. All punch list items are completed.
 - 3. Submitted all final releases of liens.
 - 4. Executed assignment form.
 - 5. Contact information for all guarantee / warranty items (including name, address, phone #, etc.)
 - 6. Operation and maintenance manuals.
 - 7. Warrantee Affidavit

1.12 LIQUIDATED DAMAGES

Upon failure to begin or complete the project or each stage of the work in accordance with the contract documents, proposal, and to the satisfaction of the City within five (5) working days of the time allowed, the bidder may be subject to charges for liquidated damages in the amount of \$ 500.00 for each and every calendar day the work remains incomplete. As compensation due the City for loss of use and for additional costs incurred by the City due to such noncompletion of the work, the City shall have the right to deduct the said liquidated damages from any amount due or that may become due to the bidder under this agreement or to invoice the bidder for such items if the costs incurred exceed the amount due to the bidder.

1.13 DEFINITIONS

PROVIDE means furnish and install.

1.14 GUARANTEES

- A. All materials and equipment shall be guaranteed for a minimum period of one (1) year from date of final acceptance thereof against defective materials, construction, or workmanship. Upon receipt of notice from the Owner or Project Manager of the failure of any part during the guaranteed period, the affected part or parts shall be replaced promptly with the new parts, by the Contractor, with no additional costs to the Owner for labor or parts.
- B. All manufacturer warranties shall be presented to the City along with final payment.

1.15 SUBMITTALS

- A. Submit 5 sets of shop drawings for review as described in General Conditions. Shop drawings for the entire project are not required to be submitted at one time. However, shop drawings for each system shall be submitted in one package – complete for that system. **Two additional set must be submitted (signed and sealed) if they are necessary to be presented to the building department for approvals.**
- B. Each package of shop drawing shall be bound as a unit, either in a 3-ring notebook or other suitable type of binder and labeled on the front cover with the contents. Each package of shop drawings shall contain a first sheet with the project name, location; date submitted, name and address of the Contractor, name and address of the equipment distributor and a list of the contents. Opposite each type of equipment (or system) shall be the manufacturer's name. The equipment data sheet shall appear in the same order as they are listed in the contents.
- C. The submittal drawings shall include complete specifications for every item including materials, finish, dimensions, fabrication details, installation instructions, standard compliance and UL approval. Where a data sheet contains details covering various sizes

or ratings of equipment – only one of which is being submitted - the only one being submitted shall be clearly marked.

1.16 FIELD MEASUREMENTS AND SITE INVESTIGATION

A. The Contractor shall have visited the job site before bidding and ascertained all existing conditions which will affect his work. Failure to do so will not be accepted as a reason for requesting extra pay in the event that existing conditions result in extra materials or labor. A mandatory pre-bid meeting will be held at City Hall, 501 Palm Ave., on Tuesday, January 5th, 2016 at 10:00 a.m. All bidders are to meet at the 1st floor lobby

B. Any existing conditions found by the Contractor, which will adversely affect the work shall immediately be brought to the attention of the Project Supervisor.

1.17 COORDINATION WITH OTHER TRADES

The plans are generally diagrammatic and the Contractor shall coordinate his work with the work of other trades so that interference's between conduits, piping, equipment, architectural, and structural work will be avoided. All necessary offsets in raceways, fittings, etc., required to properly install the work shall be furnished so as to take up a minimum space and all such offsets, fittings, etc., required to accomplish this shall be furnished and installed by the Contractor, as part of his work, without additional expense to the Owner. In the event of conflict, the Owner's authorized representative is to decide which equipment, piping, etc. must be relocated regardless of which was installed. Cutting and patching to relocate work shall exactly match original finishes, and shall be at this Contractor's expense.

1.18 COORDINATION WITH OTHER UTILITIES

Installation of underground ducts and conduits for power and telecommunications services shall be thoroughly coordinated with other utilities on the site. Duct and conduit sizes and material types shall be as shown on the drawings. Details of routing, burial depth, size of bends and termination at each end of service shall be verified on the job site.

1.19 RULES OF LOCAL UTILITY COMPANIES

Rules of local Utility Companies shall be complied with. Before submitting his bid, Contractor shall check with Utilities companies supplying services to this installation and shall determine equipment, etc.; he will be required to install and shall include cost of it in Bid.

No extra payment will be made for the installation of such items, except in cases where the requirements of the Utility Companies change after the Contractor has submitted his Bid.

1.20 UNDERGROUND SERVICE LINES

The Contractor shall be responsible to request from appropriate Utility Companies physical locations of all underground lines. Contractor shall be responsible for repairs of any broken service line as a result of his work activities.

1.21 PROTECTION OF PROPERTY

All existing structures, utilities, services, roads, trees, shrubbery, etc., shall be protected against damage or interrupted services at all times by the Bidder during the term of this contract; and the Bidder shall be held responsible for repairing or replacing property to the satisfaction of the City which is damaged by reason of the Bidder's on the property.

1.22 RECORD DRAWINGS

Maintain a complete set of prints for indicating all changes. Use red ink to mark all changes at the time of execution and deliver the set to the Construction Supervisor upon completion of the project construction. This set of blue line prints shall be stamped "As Built", dated and signed in ink by the Contractor.

1.23 EQUIPMENT MANUAL AND OWNER INSTRUCTIONS

Upon completion of the work, the Contractor shall prepare and deliver to the Construction Supervisor three (3) complete sets of operation and maintenance manuals for each electric signal, control, and communication system installed. Manual shall consist of detailed drawings catalog sheets for each component, replacement parts list, maintenance instructions and description of system operation. The Contractor shall provide qualified instructors for a minimum of twenty-four (24) hours of instruction to designated Owner personnel in the operation and maintenance of all systems.

1.24 SAFETY

The Contractor shall follow all OSHA regulations and encourage safety in the work place. Workers must have the proper safety equipment (hard hat, shoes, safety glasses, etc...) at all times. Any worker that does not comply with these requirements will be asked to leave the job site.

1.25 CLEAN UP

All useable material and debris shall be removed from the premises at the end of completion of each stage of the work, or sooner as requested by the Construction Supervisor. Contractors will have 24 hours to remove any construction material that is asked to be removed by the project supervisor. After this time, the City will remove the debris and back charge the contractor for time and equipment.

1.26 CITY WILL PROVIDE :

Temporary Water
Temporary Power
Temporary Bathroom Facilities

**CITY of HIALEAH
CITY HALL
RE-ROOFING**

SUMMARY OF WORK

Responsibilities of the Roofing Contractor include the complete roofing system of the building including but not limited to:

- Shop drawings and submittals
 - Permits including permit fees (fees will not be waived)
 - Removal of existing roof including insulation and metal flashing
 - Preparation of existing substrate.
 - Install insulation system with slopes to provide positive drainage to existing drains.
 - Install a complete roofing system as per plans and specifications including all necessary items and accessories.
 - Replace existing roof drains with new drains and covers.
 - Provide all downspouts, scuppers, flashing, sheet metal, splash blocks and crickets.
 - Furnish and install new lead flashing at all plumbing stacks penetrating the roof surface.
 - Labor and equipment to stock roofing materials
 - Provide a chute and dust control during the roof demolition process.
 - Provide a minimum Twenty (20) year NDL guarantee from the roof manufacturer.
 - Clean up and debris removal (must use a trash chute)
 - Safety equipment as per OSHA standards
 - All equipment necessary to perform work
 - Cutting and patching
-
- **Add Alternate 1:** Encapsulate the parapet wall with the new roofing system and install an aluminum parapet cap around the entire building perimeter (minimum gauge as required by code) including pt. wood nailers with fasteners as required by the Notice of Acceptance (NOA).

Sarnafil® G410

Adhered System

DISCLAIMER

All information provided by Sika Corporation ("Sika") concerning Sika products, including but not limited to, any recommendations and advice relating to the application and use of Sika products, is given in good faith based on Sika's current experience and knowledge of its products when properly stored, handled and applied under normal conditions in accordance with Sika's instructions. In practice, the differences in materials, substrates, storage and handling conditions, actual site conditions and other factors outside of Sika's control are such that Sika assumes no liability for the provision of such information, advice, recommendations or instructions related to its products, nor shall any legal relationship be created by or arise from the provision of such information, advice, recommendations or instructions related to its products. The user of the Sika product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with the full application of the product(s). Sika reserves the right to change the properties of its products without notice. All sales of Sika product(s) are subject to its current terms and conditions of sale which are available at usa.sarnafil.sika.com or by calling 800-451-2504.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at usa.sarnafil.sika.com or by calling Sika's Technical Department at 800-451-2504. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

Sika warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor.

NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.

Introduction

Sarnafil G410 Adhered System Description	ii
Regional Offices	iii

Part 1 – General Conditions

1.01 Description.....	1
1.02 Quality Assurance	1
1.03 Submittals.....	2
1.04 Code Requirements	2
1.05 Product Delivery, Storage and Handling	2
1.06 Job Conditions.....	3
1.07 Bidding Requirements	4
1.08 Warranties	5
1.09 Warranty Durations	5

Part 2 - Products

2.01 General.....	5
2.02 Membrane	5
2.03 Flashing Materials	6
2.04 Insulations / Roof Boards	8
2.05 Attachment Components.....	8
2.06 Deck Primers	10
2.07 Vapor Retarders	10
2.08 Walkway Protection.....	10
Error! Reference source not found. Miscellaneous Accessories	Error! Bookmark not defined.
2.01 Sealants and Pitch Pocket Fillers.....	11
2.02 Miscellaneous Fasteners and Anchors	11
2.03 Related Materials	11

Part 3 – Execution

3.01 Pre-Construction Conference.....	11
3.02 Substrate Condition	12
3.03 Substrate Preparation	12
0 Substrate Inspection.....	12
3.04 Vapor Retarder Installation.....	13
3.05 Wood Nailer Installation	14
3.06 Insulation / Roof Board Installation	14
3.07 Installation of Sarnafil Membrane.....	15
3.09 Hot-Air Welding of Seam Overlaps	16
3.10 Membrane Flashings	17
3.11 Metal Flashings	17
3.12 Sarnaclad Metal Base Flashings / Edge Metal	18
3.13 Edge Metal	18
3.14 Walkway Installation	18
Error! Reference source not found. Perimeter Warning	Error! Bookmark not defined.
3.15 Temporary Cut-Off	18
3.16 Completion	19
3.17 Details.....	19

INTRODUCTION

Sarnafil G410 Adhered System Description

In our Adhered System, Sarnafil G410 roof membrane is adhered with Sarnacol 2170 adhesive to the pre-secured insulation board or cover board. The boards are secured to the roof deck by board adhesive.

One advantage of the Adhered System is appearance. An Adhered System is often used on high-profile facilities that have roofs with unusual shapes, forms, and colors. Another advantage is that there is no movement of the membrane under wind load.

Sarnafil G410 membrane is ideal for the Adhered System due to its excellent dimensional stability. The manufacturing process fuses liquid PVC to a non-woven fiberglass reinforcement resulting in a monolithic membrane that is stress free and unable to delaminate under any rooftop condition.

Each Sarnacol Adhesive was developed by Sika Corporation specifically for Sarnafil membranes. These adhesives have superior bonding and long term performance properties.

We welcome you to review the following Sika Corporation - Roofing Specification and we ask that you contact us if you have any questions or need any additional information.

The proceeding specification should be amended as required to meet the project's needs.

Thank you for choosing Sika Corporation for your roofing needs.

REGIONAL OFFICES

NEW ENGLAND REGION

225 Dan Road
Canton, MA 02021
Phone:(781) 821-0865
Fax:(781) 821-9205

SOUTHWEST REGION

2517 Fairway Park, Suite 200
Houston, TX 77092
Phone: (713) 812-0102
Fax: (713) 812-0107

EASTERN REGION

One Park Way 3rd Floor
Upper Saddle River, NJ 07458
Phone:(201) 327-0479
Fax:(201) 327-4069

MOUNTAIN REGION

2881 South 900 West
Salt Lake City, UT 84119
Phone:(801) 575-8648
Fax:(801) 355-4407

SOUTHERN REGION

3483 Satellite Boulevard
Duluth, GA 30096
Phone:(770) 495-0025
Fax:(770) 495-0027

WESTERN REGION NORTH

2375 Rodolfo Court
Sparks, NV 89436
Phone:(775) 626-7701
Fax:(775) 626-7703

MIDWEST REGION

200 W. 22nd St., Suite 216
Lombard, IL 60148
Phone:(800) 532-5123
Fax:(630) 620-9646

WESTERN REGION SOUTH

6590 Darin Way
Cypress, CA 90630
Phone:(714) 898-9355
Fax:(714) 898-9357

WEB ADDRESS:

www.sikacorp.com

EMAIL ADDRESS:

webmaster.sarnafil@us.sika.com

SIKA CANADA - ROOFING

6915 Davand Drive
Mississauga, ON L5T 1L5
Phone:(905) 795-3177
Fax:(905) 795-3192
www.sika.ca

**SECTION 07 54 19
THERMOPLASTIC MEMBRANE ROOFING
SARNAFIL® G410 ADHERED SYSTEM**

TO DISPLAY OR HIDE SPECIFIER NOTES

MS Word (2007 and later):

1. Select the OFFICE logo or FILE in the upper left corner.
2. Select OPTIONS.
3. Select DISPLAY on the left menu.
4. Select HIDDEN TEXT under "Always Show These".

MS Word (prior to 2007):

1. Select TOOLS.
2. Select OPTIONS.
3. Select VIEW.
4. Select HIDDEN TEXT.

PART 1 - GENERAL CONDITIONS

1.01 DESCRIPTION

A. Scope

To install a complete Sarnafil G410 Adhered System including membrane, flashings and other components.

B. Related Work

The work includes but is not limited to the installation of:

1. Removal of Existing Roofing and Insulation
2. Substrate Preparation
3. Roof Drains
4. Vapor Retarder
5. Wood Blocking
6. Insulation
7. Separation Layers
8. Roof Membrane
9. Fasteners
10. Adhesive for Flashings
11. Roof Membrane Flashings
12. Walkways
13. Metal Flashings
14. Sealants

C. Upon successful completion of work the following warranties may be obtained:

1. Sika Corporation Warranty
2. Roofing Applicator Warranty

1.02 QUALITY ASSURANCE

- A.** This roofing system shall be applied only by a Roofing Applicator authorized by Sika Corporation prior to bid (Sika Corporation "Applicator").
- B.** Upon completion of the installation and the delivery to Sika Corporation by the Applicator of certification that all work has been done in strict accordance with the contract specifications and Sika Corporation's requirements, a Sika Corporation Technical Service Representative will review the installed roof system wherever a System Warranty has been specified.
- C.** There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner, the Owner's Representative and Sika Corporation.
- D.** All work pertaining to the installation of Sarnafil membrane and flashings shall only be completed by Applicator personnel trained and authorized by Sika Corporation in those procedures.

- E. Roofing membrane manufacturer must have a demonstrated performance history of producing PVC roof membranes no less, in duration of years, than the warranty duration specified.
- F. Product to be manufactured by membrane supplier and not private labeled.
- G. Manufacturer to have a minimum of five years experience recycling their membranes at the end of their service life back into new membrane products. Provide a minimum of five reference projects.

1.03 SUBMITTALS

At the time of bidding, the Applicator shall submit to the Owner (or Representative) the following:

- A. Copies of Specification.
- B. Samples of each primary component to be used in the roof system and the manufacturer's current literature for each component.
- C. Written approval by the insulation manufacturer (as applicable) for use and performance of the product in the proposed system.
- D. Sample copy of Sika Corporation's warranty.
- E. Sample copy of Applicator's warranty.
- F. Dimensioned shop drawings which shall include:
 - 1. Outline of roof with roof size and elevations shown.
 - 2. Details of flashing methods for penetrations.
- G. Certifications by manufacturers of roofing and insulating materials that all materials supplied comply with all requirements of the identified ASTM and other industry standards or practices.
- H. Certification from the Applicator that the system specified meets all identified code and insurance requirements as required by the Specification.
- I. Safety Data Sheets (SDS)

1.04 CODE REQUIREMENTS

The Applicator shall submit evidence that the proposed roof system meets the requirements of the local building code and has been tested and approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.

- A. System shall be designed to meet a minimum wind design requirements of the most recent version of ASCE 7.
- B. Miami-Dade Product Approval
- C. Underwriters Laboratories, Inc. - Northbrook, IL
 - 1. Class A assembly

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.

- C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.
- D. As a general rule all adhesives shall be stored at temperatures between 40°F (4°C) and 80°F (27°C). Read instructions contained on adhesive canister for specific storage instructions.
- E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
- F. Any materials which the Owner's representative or Sika Corporation determines to be damaged are to be removed from the job site and replaced at no cost to the Owner.

1.06 JOB CONDITIONS

- A. Sika Corporation materials may be installed under certain adverse weather conditions but only after consultation with Sika Corporation, as installation time and system integrity may be affected.
- B. Only as much of the new roofing as can be made weathertight each day, including all flashing and detail work, shall be installed. All seams shall be heat welded before leaving the job site that day.
- C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risks.
- D. All surfaces to receive new insulation, membrane or flashings shall be dry. Should surface moisture occur, the Applicator shall provide the necessary equipment to dry the surface prior to application.
- E. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- F. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.
- G. The Applicator is cautioned that certain Sarnafil membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with Sarnafil membranes. The Applicator shall consult Sika Corporation regarding compatibility, precautions and recommendations.
- H. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Applicator shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over Sarnafelt or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- I. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air or similar methods.
- J. The Applicator shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction.
- K. All roofing, insulation, flashings and metal work removed during construction shall be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.
- L. All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) shall be immediately removed from the site by the Applicator and properly transported to a legal dumping area authorized to receive such material.

- M. The Applicator shall take precautions that storage and application of materials and equipment does not overload the roof deck or building structure.
- N. Installation of a Sarnafil membrane over coal tar pitch or a resaturated roof requires special consideration to protect the Sarnafil membrane from volatile fumes and materials. Consult Sika Corporation for precautions prior to bid.
- O. Flammable adhesives and deck primers shall not be stored and not be used in the vicinity of open flames, sparks and excessive heat.
- P. All rooftop contamination that is anticipated or that is occurring shall be reported to Sika Corporation to determine the corrective steps to be taken.
- Q. The Applicator shall verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Applicator shall report any such blockages in writing (letter copy to Sika Corporation) to the Owner's Representative for corrective action prior to the installation of the Sika Corporation roof system.
- R. Applicator shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify Owner of such condition in writing for correction at the Owner's expense (letter copy to Sika Corporation).
- S. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.
- T. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.
- U. The Applicator shall conduct fastener pullout tests in accordance with the latest version of the SPRI/ANSI Fastener Pullout Standard to verify condition of the deck/substrate and to confirm expected pullout values.
- V. The Sarnafil membrane shall not be installed under the following conditions without consulting Sika Corporation's Technical Dept. for precautionary steps:
 - 1. The roof assembly permits interior air to pressurize the membrane underside.
 - 2. Any exterior wall has 10 percent or more of the surface area comprised of opening doors or windows.
 - 3. The wall/deck intersection permits air entry into the wall flashing area.
- W. Precautions shall be taken when using Sarnacol adhesives at or near rooftop vents or air intakes. Adhesive odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building. Keep lids on unused cans at all times.
- X. Protective wear shall be worn when using solvents or adhesives or as required by job conditions.
- Y. Sarnafil membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions is hazardous. Appropriate safety measures must be implemented prior to working on such surfaces. Always follow OSHA and other relevant fall protection standards when working on roofs.

1.07 BIDDING REQUIREMENTS

A. Pre-Bid Meeting:

A pre-bid meeting shall be held with the Owner's Representative and involved trades to discuss all aspects of the project. The Applicator's field representative or roofing foreman for the work shall be in attendance. Procedures to avoid rooftop damage by other trades shall be determined.

B. Site Visit:

Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect

proper execution of the work. All dimensions and quantities shall be determined or verified by the Applicator. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative.

1.08 WARRANTIES**A. Sika Corporation Warranty**

Upon successful completion of the work to Sika Corporation's satisfaction and receipt of final payment, the Sika Corporation Warranty shall be issued.

1. System Warranty (only products purchased from Sika Corporation are covered under System Warranty)

B. Applicator/Roofing Contractor Warranty

Applicator shall supply Owner with a separate workmanship warranty. In the event any work related to roofing, flashing, or metal is found to be within the Applicator warranty term, defective or otherwise not in accordance with Contract Documents, the Applicator shall repair that defect at no cost to the Owner. Applicator's warranty obligation shall run directly to Owner, and a copy shall be sent to Sika Corporation.

C. Owner Responsibility

Owner shall notify both Sika Corporation and the Applicator of any leaks as they occur during the time period when both warranties are in effect.

1.09 WARRANTY DURATIONS

- A. Sika Corporation's warranty shall be in effect for a 20 year duration.
- B. Applicator's/Roofing Contractor's Warranty shall be in effect for a 5 year duration.

PART 2 - PRODUCTS**2.01 GENERAL**

- A. Components of the roof system are to be products of Sika Corporation as indicated on the Detail Drawings and specified in the Contract Documents.
- B. Components to be used that are other than those supplied or manufactured by Sika Corporation may be submitted for review and acceptance by Sika Corporation. Sika Corporation's acceptance of any other product is only for a determination of compatibility with Sika Corporation products and not for inclusion in the Sika Corporation warranty. The specifications, installation instructions, limitations, and restrictions of the respective manufacturers must be reviewed by the Owner's Representative for acceptability for the intended use with Sika Corporation products.

2.02 MEMBRANE**A. Membrane shall conform to:**

1. ASTM D4434 (latest version), "Standard for Polyvinyl Chloride Sheet Roofing". Classification: Type II, Grade I.
2. NSF/ANSI Standard 347, "Sustainability Assessment for Single Ply Roofing Membranes". Certification Level: Platinum.
3. The manufacture to guarantee that the membrane thickness meets or exceeds [the specified thickness] when tested according to ASTM D751

- B. Sarnafil G410 thermoplastic membrane with fiberglass reinforcement and lacquer coating.
- C. Thickness
1. Sarnafil G410-15, 60 mil (1.5 mm)
- D. Color of Membrane
1. EnergySmart White, initial solar reflectance of 0.83, emittance of 0.90, and solar reflective index (SRI) of 104 (ENERGY STAR listed).
- E. Typical Physical Properties ⁽¹⁾

Property	ASTM Test Method	ASTM Type II D-4434 Spec. Requirement	Typical Results
Overall Thickness, mil	D751	45	60
Thickness Over Scrim, mil	--	16	27
Reinforcing Material	--	--	Fiberglass
Breaking Strength, lbf/in (N)	D751	55 (245)	80 (356)
Elongation at Break, %	D751	250 & 220	250 & 220
M. D. ¹ & C.M.D. ¹			
Seam Strength, % of original ²	D751	75	Pass
Retention of Properties After Heat Aging	D3045	--	--
Tensile Strength, % of original	D751	90	Pass
Elongation, % of original	D751	90	Pass
Tearing Resistance, lbf (N)	D1004	10 (45)	17.5 (78)
Low Temperature Bend, -40°F (-40°C)	D2136	Pass	Pass
Accelerated Weathering Test (Florescent Light UV exposure), Hours	G154	5,000	10,000
Cracking (7x magnification)	--	None	None
Discoloration (by observation)	--	Negligible	Negligible
Crazing (7x magnification)	--	None	None
Linear Dimensional Change, %	D1204	0.1	-0.02
Weight Change After Immersion in Water, %	D570	± 3.0	1.9
Static Puncture Resistance	D5602	Pass	Pass
Dynamic Puncture Resistance, ft-lbf (J)	D5635	7.3 (10)	Pass
Recycled Content (10' & 5' sheet only)		9% Pre-Consumer / 1% Post-Consumer	

* Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions, and curing conditions.

1 M.D. = Machine Direction, C.M.D. = Cross Machine Direction

2 Failure occurs through membrane rupture not seam failure.

2.03 FLASHING MATERIALS

A. Wall / Curb Flashing

1. Sarnafil G410 Flashing Membrane

A fiberglass reinforced membrane adhered to approved substrates using Sarnacol adhesive. Sarnafil G410 Flashing Membrane comes in 8" and 12" widths and is 60 mil (1.5 mm) thick. Consult Product Data Sheets for adhesive options and additional information.

2. G459 Flashing Membrane

A fiberglass reinforced membrane adhered to asphalt, other contaminated surfaces, or approved substrates using Sarnacol adhesive. G459 comes in 6.5' and 3.25' widths and is 60 mil (1.5mm) thick. The standard color is white on tan. The tan side of the membrane must be the side exposed to

the contamination. Consult Product Data Sheet for adhesive rates and additional information.

3. Sarnaclad

A PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles. Sarnaclad is a 24 gauge, G90 galvanized metal sheet with a 20 mil (0.5 mm) unsupported Sarnafil membrane laminated on one side. The dimensions of Sarnaclad are 4 ft x 8 ft (1.2 m x 2.4 m) or 4 ft x 10 ft (1.2 m x 3.0 m). Consult Product Data Sheet for additional information.

4. Sarnaclad

A PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles. Sarnaclad is a 24 gauge, G90 galvanized metal sheet with a 20 mil (0.5 mm) unsupported Sarnafil membrane laminated on one side. The dimensions of Sarnaclad are 4 ft x 8 ft (1.2 m x 2.4 m) or 4 ft x 10 ft (1.2 m x 3.0 m). Consult Product Data Sheet for additional information.

5. Non-Typical Edge

Project-specific perimeter edge detail reviewed and accepted for one-time use by Sika Corporation's Technical Department. Consult Regional Technical Manager prior to job start for review and consideration for acceptance.

B. Miscellaneous Flashing

1. Detail Membrane

A 60 mil (1.5 mm) fiberglass reinforced membrane, available 12" x 50' (30.5 cm x 15.2 m) roll and 24" x 50' (61 cm x 15.2 m) roll, more pliable than Sarnafil G410 membrane, good use for flashing pipes, corners, and unusual shaped penetrations. Consult Product Data Sheet for additional information.

2. Sarnacorners - Inside

A 60 mil (1.5 mm) thick prefabricated inside corner injection molded. Consult Product Data Sheet for additional information.

3. Sarnacorners - Outside

A 60 mil (1.5 mm) thick prefabricated outside corner injection molded. Consult Product Data Sheet for additional information.

4. Sarnastack Universal, A, B, or C

A 60 mil (1.5 mm) thick prefabricated stack/pipe boot injection molded. Consult Product Data Sheets for additional information.

5. Sarnareglet

A heavy-duty, extruded aluminum flashing termination reglet used at walls and large curbs. Sarnareglet is produced from 6063-T5, 0.10 inch to 0.12 inch (2.5 mm to 3.0 mm) thick extruded aluminum. Sarnareglet has a 2-1/4 inch (57 mm) deep profile, and is provided in 10 foot (3 m) lengths. Use prefabricated Sarnareglet mitered inside and outside corners where walls intersect. Consult Product Data Sheet for additional information.

6. Sarnadrain - UFlow

A seamless heavy-duty aluminum drain, featuring a coated flange for hot air welding of Sarnafil membranes. Sarnadrain-Uflow consists of a one-piece spun, 0.125 in.(3.175 mm), 11 gauge thick aluminum body, a 17.5" (445 mm) diameter, and a 12" (305 mm) long drain stem.

7. Sarnacol 2170 Adhesive

A solvent-based reactivating adhesive used to attach membrane to flashing substrate. Typical flashing substrate coverage rate is 45-60ft² /gal (1.10–1.47m²/L) . Consult Product Data Sheets for additional information.

8. Sarnafelt

A leveling and/or separation layer that is necessary behind Sarnafil G410 or G459 Flashing Membrane when the flashing substrates are rough or incompatible with the flashing membrane. When Sarnafelt is used as a leveling and/or separating layer a 2nd coat on the dried substrate at the same rate is required to adhere the felt and then the membrane. Consult Product Data Sheets for additional information.

2.04 INSULATIONS / ROOF BOARDS

A. Sarnatherm Insulation Glass Fiber Mat Facer

A 20 or 25 psi rigid polyisocyanurate insulation board with a coated polymer bonded glass fiber mat facer. A glass mat facer CANNOT be used with hot-applied systems. Available in 4 x 4 ft (1.2 x 1.2 m) or 4 x 8 ft (1.2 x 2.4 m) flat or tapered sizes in various thicknesses. Consult Product Data Sheet for additional information.

B. Sarnatherm Insulation ACFoam IV

A 20 or 25 psi rigid polyisocyanurate insulation board with integrally laminated heavy, durable, and dimensionally stable coated polymer bonded glass fiber mat facer. Glass mat facers CANNOT be used with hot-applied systems. Available in 4 x 4 ft (1.2 x 1.2 m) or 4 x 8 ft (1.2 x 2.4 m) flat or tapered sizes in various thicknesses.

C. Sarnatherm Roof Board-H

A >100 psi high density polyisocyanurate roof board with a coated glass facer, provided in 4 ft. x 4 ft. (1.2 m x 1.2 m) and 4 ft. x 8 ft. (1.2 m x 2.4 m) board sizes and in a thickness of 1/2 inch (12.7 mm). Consult Product Data Sheet for additional information.

D. DensDeck Prime

Employs enhanced fiberglass mats front and back that are bonded to a high density gypsum core. DensDeck Prime is provided in 4 ft. x 4 ft. (1.2 m x 1.2 m) or 4 x 8 ft (1.2 x 2.4 m) board sizes and in thicknesses of 1/4, 1/2 and 5/8 inch (6, 13 and 16 mm). Consult Product Data Sheet for additional information.

2.05 ATTACHMENT COMPONENTS

A. Membrane Adhesive

1. Sarnacol 2170 Adhesive:

A solvent-based reactivating-type adhesive used to attach the membrane to the substrate. Consult Product Data Sheets for additional information.

SARNACOL 2170 / 2170 VC COVERAGE RATES FOR BAREBACK MEMBRANE					
	Substrate		Membrane	Total	Approximate / Pail
Polyisocyanurate Felt Facer	80 ft ² /gal (2.0 m ² /L)	+	200 ft ² /gal (4.9 m ² /L)	= 57 ft ² /gal (5.3 m ² /L)	285 ft ² (26.5 m ²)
Polyisocyanurate Glass Facer	100 ft ² /gal (2.5 m ² /L)	+	200 ft ² /gal (4.9 m ² /L)	= 67 ft ² /gal (6.2 m ² /L)	333 ft ² (30.9 m ²)

Smooth Plywood	100 ft ² /gal (2.5 m ² /L)	+	200 ft ² /gal (4.9 m ² /L)	=	67 ft ² /gal (6.2 m ² /L)	333 ft ² (30.9 m ²)
Smooth Concrete Deck	80 ft ² /gal (2.0 m ² /L)	+	200 ft ² /gal (4.9 m ² /L)	=	57 ft ² /gal (5.3 m ² /L)	285 ft ² (26.5 m ²)
DensDeck Prime	100 ft ² /gal (2.5 m ² /L)	+	200 ft ² /gal (4.9 m ² /L)	=	67 ft ² /gal (6.2 m ² /L)	333 ft ² (30.9 m ²)

Notes:

- a) Due to an increase in viscosity when outdoor temperatures during installation are below 40°F (5°C), add 1/2 gallon per 100 ft² (2.5m²) to rate for estimating purposes.

B. Insulation / Roof Board Adhesive

1. Sarnacol 2163 Adhesive:

A low odor, VOC compliant, one step, low-rise urethane foam used to attach insulation to approved compatible substrates. Adhesive is applied with a gravity fed applicator or by hand with a dual component caulk gun. Additional adhesive may be required for rougher surfaces. Consult Product Data Sheets for additional information and for approved substrates and approved insulations.

Coverage - Approximately 600 sq. ft. per case. Rates are based on an application pattern of 4 ribbons, 1/4-1/2 in. (6-13 mm) beads, 12 in. (30 cm) o.c. per 4 x 4 ft. (121.9 x 121.9 cm) insulation board. Coverage rates may vary over irregular surfaces.

Approximate Set-Time - Air Temperature between 60-90°F (15-32°C) = 5-8 minutes.
Air Temperature between 32-60°F (0-15°C) = 8-15 minutes.

Storage - For ease of application, maintain a minimum material temperature of 70°F (21°C) prior to use. Store in a cool dry location at temperatures between 55°F (12.7° C) and 85°F (29.4°C), protect from freezing at all times. Shelf life is 8 months from the date of manufacture.

2. Sarnacol AD Board Adhesive:

A low odor, VOC compliant, one step foamable polyurethane adhesive used to attach insulation to approved compatible substrates. Adhesive is applied by combining two 5 gallon box sets placed on a cart and dispensed through a combining hose. Additional adhesive may be required for rougher surfaces. Consult Product Data Sheets for additional information and for approved substrates and approved insulations.

Coverage - Typical coverage rates for the 5 gallon (18.9 L) box sets are 1,800 to 2,200 sq.ft. (167 - 204 m²). All coverage rates are based on 12 inch (30cm) on center maximum spacing. The minimum ambient and surface temperatures should be 40F (4.4C) and rising.

Approximate Set-Time - Designed to provide approximately 5 - 10 minutes of open time during a typical summer day. The open time will be shorter on hot humid days and longer on cold dry days.

Storage - For ease of application, maintain a minimum material temperature of 70°F (21°C) prior to use. Store in a cool dry location at temperatures between 55°F (12.7° C) and 85°F (29.4°C), protect from freezing at all times. Shelf life is 12 months from the date of manufacture.

C. Sarnastop

An extruded aluminum, low profile bar used with certain Sarnafasteners to attach to the roof deck or to walls/curbs at terminations, penetrations and at incline changes of the substrate. Sarnastop is a 1 inch (25 mm) wide, flat aluminum bar 1/8 inch (3 mm) thick that has predrilled holes every 6 inches (152 mm) on center. Consult Product Data Sheet for additional information.

D. Sarnabar

An FM-approved, heavy-duty, 14 gauge, galvanized or stainless, roll-formed steel bar used to attach membrane to roof decks. The formed steel is pre-punched with holes every 1 inch (25 mm) on center to allow various Sarnafastener spacing options. Consult Product Data Sheet for additional information.

2.06 DECK PRIMERS**A. Sarnavap SA Primer**

A solvent-based primer used to prime structural concrete, lightweight concrete, gypsum decks, and approved gypsum boards prior to the application of Sarnavap SA or Sopralene Stick vapor retarders. Sarnavap SA Primer can be applied at temperatures of 14°F (-10°C) and above. The coverage rate will range from 163 - 400 ft²/gal (4.0 - 9.8 m²/L) for non-porous surfaces to 82 - 135 ft²/gal (2 - 3.3 m²/L) for porous surfaces. The VOC content is 644 g/L.

B. Elastocol 500 Primer

A blend of elastomeric and bitumen solvents for use when torch applying Sopralene 180 SP 3.5 vapor retarder direct to structural concrete for improved adhesion. Elastocol 500 Primer can be applied at temperatures of 14°F (-10°C) and above. The coverage rate is 100-150 ft²/gal (2.4 - 3.6 m²/L). The VOC content is 340 g/L.

2.07 VAPOR RETARDERS**A. Sarnavap SA**

A 32 mil (0.8 mm) self-adhesive vapor barrier that can also serve as temporary roof protection. Sarnavap Self-Adhered is available in rolls 44.9 inches x 133.8 feet (1.14 x 40.8 m). Consult Product Data Sheet for additional information.

B. Sopralene Stick

A 108 mil (2.74 mm) self-adhesive vapor barrier that can also serve as temporary roof protection for up to 6 months. Sopralene Stick comes in 39" (1 m) wide by 49 ft. (15 m) long rolls. The Sopralene Stick top surface can accept approved urethane adhesives for insulation or membrane attachment.

C. Sopralene 180 SP 3.5

A torch applied vapor retarder with a plastic burn-off film underside and a high brush sanded topside finish. Sopralene 180 SP 3.5 is 140 mils (3.5 mm) thick and the rolls are 39" (1 m) wide by 33 ft. (10 m) long. Intended for direct torch application to primed structural concrete decks only. Requires the use of Elastocol 500 primer and the sanded topside surface can accept approved urethane adhesives for insulation or membrane attachment. The torch application allows for installation without low temperature restrictions and provides a durable, temporary roof for up to 6 months.

2.08 WALKWAY PROTECTION**A. Sarnatred-V**

A polyester reinforced, 0.096 inch (96 mil/2.4 mm), weldable membrane with surface embossment similar to a chevron pattern. Used as a protection layer from rooftop traffic. Sarnatred-V is supplied in rolls of 39 inches (1.0 m) wide and 50 feet (15 m) long. Consult Product Data Sheet for additional information.

2.01 SEALANTS AND PITCH POCKET FILLERS

- A. Sikaflex-1a (for termination details and pitch pocket toppings).
- B. Sarnafiller (two-component urethane adhesive for pitch pocket toppings).
- C. Colply Adhesive Trowel Grade

Is used in conjunction with all Sika Roofing supplied modified bituminous vapor retarders for detailing around penetrations and flashings. Colply Adhesive Trowel Grade meets the requirements of ASTM D3019 standards. Application temperature range is 41 - 104°F (5 - 40°C). Colply Adhesive Trowel Grade is applied at the rate of approximately 10 ft²/gal (0.2 m²/L) at 1/8" (3.1 mm) thickness. VOC content is 225 g/L.

- D. Depending on substrates, the following sealants are options for temporary overnight tie-ins:
 - 1. Type III hot asphalt conforming to ASTM D312 (latest version).
 - 2. Sarnafiller.
 - 3. Multiple layers of roofing cement and felt.
 - 4. Spray-applied, water-resistant urethane foam.
 - 5. Mechanical attachment with rigid bars and compressed sealant.

2.02 MISCELLANEOUS FASTENERS AND ANCHORS

- A. All fasteners, anchors, nails, straps, bars, etc. shall be post-galvanized steel, aluminum or stainless steel. Mixing metal types and methods of contact shall be assembled in such a manner as to avoid galvanic corrosion. Fasteners for attachment of metal to masonry shall be expansion type fasteners with stainless steel pins. All concrete fasteners and anchors shall have a minimum embedment of 1-1/4 inch (32 mm) and shall be approved for such use by the fastener manufacturer. All miscellaneous wood fasteners and anchors used for flashings shall have a minimum embedment of 1 inch (25 mm) and shall be approved for such use by the fastener manufacturer.

2.03 RELATED MATERIALS

- A. Wood Nailer

Treated wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings. Thickness of nailers must match the insulation thickness to achieve a smooth transition. Wood nailers shall be treated for fire and rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19 percent by weight on a dry-weight basis.

Note: Wood nailers or wood blocking for snow protection system shall be installed prior to the installation of the roof membrane whenever possible.

- B. Plywood
When bonding directly to plywood, a minimum 1/2 inch (12 mm) CDX (C side out), smooth-surfaced exterior grade plywood with exterior grade glue shall be used. Rough-surfaced plywood or high fastener heads will require the use of Sarnafelt behind the flashing membrane. Plywood shall have a maximum moisture content of 19 percent by weight on a dry weight basis.

PART 3 - EXECUTION**3.01 PRE-CONSTRUCTION CONFERENCE**

- A. The Applicator, Owner's Representative/Designer and Manufacturer(s) shall attend a pre-construction conference.
- B. The meeting shall discuss all aspects of the project including but not limited to:

1. Safety
2. Set up
3. Construction schedule
4. Contract conditions
5. Coordination of the work

3.02 SUBSTRATE CONDITION

- A. Applicator shall be responsible for acceptance or provision of proper substrate to receive new roofing materials.
- B. Applicator shall verify that the work done under related sections meets the following conditions:
1. Roof drains and scuppers have been reconditioned or replaced and installed properly.
 2. Roof curbs, nailers, equipment supports, vents and other roof penetrations are properly secured and prepared to receive new roofing materials.
 3. All surfaces are smooth and free of dirt, debris and incompatible materials.
 4. All roof surfaces shall be free of water, ice and snow.

3.03 SUBSTRATE PREPARATION

The roof deck and existing roof construction must be structurally sound to provide support for the new roof system. The Applicator shall load materials on the rooftop in such a manner as to eliminate risk of deck overload due to concentrated weight. The Owner's Representative shall ensure that the roof deck is secured to the structural framing according to local building code and in such a manner as to resist all anticipated wind loads in that location.

C. Reroofing with Removal of Existing Bitumen Roofing

General Criteria

All existing roofing, base flashing, deteriorated wood blocking or deteriorated metal flashings shall be removed. Remove only that amount of roofing and flashing which can be made weathertight with new materials during a one-day period or before the onset of inclement weather.

1. Poured Structural Concrete Deck:

- a) Without Vapor Retarder - The roof deck shall be installed and cured in accordance with industry standards. The surface shall be dry and free of moisture, have a smooth and level finish, and shall be free of dust, excess moisture, oil-based curing agents and loose debris. Under no circumstances shall a sealer be used in lieu of a curing agent. Sharp ridges or other projections above the surface shall be removed before roofing.
- b) With Vapor Retarder - The roof deck shall be installed and cured in accordance with industry standards. The surface shall be dry and free of moisture, have a level finish, and shall be free of dust, excess moisture, oil-based curing agents and loose debris. Under no circumstances shall a sealer be used in lieu of a curing agent. Sharp ridges or other projections above the surface shall be removed before roofing. If Sarnavap SA or Sopralene Stick is specified a concrete surface profile CSP 3 to CSP 5 is required. If Sopralene 180 SP 3.5 is specified a concrete surface profile CSP 3 to CSP 6 is required. Achieve concrete surface profile in accordance with the ICRI Technical Guideline No. 310.2R-2013.

SUBSTRATE INSPECTION

- A. A dry, clean and smooth substrate shall be prepared to receive the Sarnafil G410 Adhered roof system.
- B. The Applicator shall inspect the substrate for defects such as excessive surface roughness, contamination, structural inadequacy, or any other condition that will adversely affect the quality of work.
- C. The substrate shall be clean, smooth, dry, free of flaws, sharp edges, loose and foreign material, oil and grease. Roofing shall not start until all defects have been corrected.

- D. All roof surfaces shall be free of water, ice and snow.
- E. Sarnafil shall be applied over compatible and accepted substrates only.

3.04 VAPOR RETARDER INSTALLATION

General Criteria:

Interior (inside temperature/relative humidity) or exterior conditions may create a need for a vapor barrier. The design professional shall decide whether a vapor barrier is necessary. It is the design professional's responsibility to determine the type and location of a vapor barrier. If sealed properly, a vapor barrier can also act as an air barrier (positive pressure) for roofs intended over air-permeable decks (steel, wood, precast, etc.). When reroofing over the existing asphalt roof, the old roof may be considered to be an adequate vapor barrier/air barrier if the details are properly sealed.

A. Sarnavap SA

1. Sarnavap SA requires one of the primers designated for use with the self-adhered vapor retarders. Shake or stir primer before applying. Primers can be rolled, brushed or sprayed. Primer is not required on steel. Let the primer dry completely.
2. Install Sarnavap SA over a clean dry substrate. When installing the product begin at the bottom of the slope. Unroll Sarnavap SA onto the substrate for alignment. Overlap each sheet by 3" (75 mm) on the side lap and 6" (152 mm) on the end laps. Stagger end laps by at least 12" (304 mm).
3. When aligned, peel back a portion of the silicone release sheet and press the membrane onto the substrate. When securely adhered continue pulling the release sheet diagonally.
4. Use a minimum 100 lb. (45 kg) steel roller to press the Sarnavap SA membrane down onto the substrate including the laps. Use the roller to push out any air bubbles out to the edge of the membrane. Do not cut the membrane to remove a bubble.
5. Apply Colply Adhesive Trowel Grade to seal around penetrations. With a trowel, mound the adhesive around the penetrations sufficiently to seal the opening. Do not apply Colply Adhesive Trowel Grade where it may ultimately come into contact with the PVC membrane.

B. Sopralene Stick

1. Sopralene Stick requires one of the primers designated for use with the self-adhered vapor retarders. Shake or stir primer before applying. Primers can be rolled, brushed or sprayed. Primer is not required on steel. Let the primer dry completely.
2. After the primer has dried completely, unroll, position, and align the length of self-adhered vapor retarder at the lowest point of the roof with the release poly covered selvage edge on the up-slope side.
3. After the sheet is placed in its final position, re-roll so that one-half of the sheet is rolled up. Using a straight blade utility knife, carefully score the release poly across the width of the roll.
4. Roll the self-adhered vapor retarder into its final position as the release poly is being removed. Re-roll the remaining section of the self-adhered vapor retarder and repeat the process. Roll with 100 lb. (45 kg) steel roller to ensure full contact with the substrate.
5. Align successive sheets with 3" (76 mm) wide side laps and 6" (152 mm) wide end laps. Seam area has a pre-applied primer/adhesive for mating with the bottom of the next sheet. Remove the poly backing on the seam area and mate the top sheet to the bottom. Roll the seam area to insure constant contact. End laps are to be hot air welded. Hot air welded laps must have a minimum of ½" (13 mm) bleed out.
6. Apply Colply Adhesive Trowel Grade to seal around penetrations. With a trowel, mound the adhesive around the penetrations sufficiently to seal the opening. Do not apply Colply Adhesive Trowel Grade where it may ultimately come into contact with the PVC membrane.

C. Sopralene 180 SP 3.5 (Torch Applied)

Torch applied products should only be installed by trained personnel. It is imperative that the NRCA safety guidelines, as outlined in their Certified Roofing Torch Applicator Program (CERTA), and good industry practices be followed.

1. Sopralene 180 SP 3.5 requires Elastocol 500 Primer to be used on concrete substrates. Apply Elastocol 500 Primer with a roller, brush or spray and let dry completely.
2. After the primer has dried completely, install Sopralene 180 SP 3.5 vapor retarder in a shingle fashion (starting at the low point so the laps will properly shed water).
3. Unroll the first roll of vapor retarder and align the side lap. Back roll the sheet halfway. Begin torching the bottom side of the vapor retarder. As the membrane begins to soften begin pulling the roll forward with a metal pole. When heated properly there should be a bleed out of approximately ½" (13 mm). Back roll the other half of the roll and repeat the process.
4. Kick out the next roll and align the side lap. Side laps must be a minimum of 3" (76 mm). End laps should be a minimum of 6" (152 mm). Stagger the end laps a minimum of 12" (304 mm). When heating the membrane move the torch in an ' L ' pattern to insure heating of the lap area on the bottom sheet. Proper heating will create a minimum ½" (13 mm) bleed out.
5. Walk in the seam area or use a weighted roller to insure proper adhesion and bleed out.
6. Before heating cut the lower outside corner of the end lap at a 45 degree angle to minimize material buildup at membrane intersection.
7. Ensure that all laps are firmly and smoothly adhered. Ensure no wrinkles, voids or fishmouths are present. Check the seams with the edge of a trowel. Any loose areas should be lifted with the trowel, re-heated and pushed back down to achieve the necessary bleed out.
8. Apply Colply Adhesive Trowel Grade to seal around penetrations. With a trowel, mound the adhesive around the penetrations sufficiently to seal the opening. Do not apply Colply Adhesive Trowel Grade where it may ultimately come into contact with the PVC membrane.
9. **Do NOT torch apply Sopralene 180 SP 3.5 to combustible substrates or substrates with a combustible backing.** In such locations Sopralene Stick must be used.

3.05 WOOD NAILER INSTALLATION

- A. Install continuous wood nailers at the perimeter of the entire roof and around roof projections and penetrations as shown on the Detail Drawings.
- B. Nailers shall be anchored to resist a minimum force of 300 pounds per lineal foot (4,500 Newtons per lineal meter) in any direction. Individual nailer lengths shall not be less than 3 feet (0.9 meter) long. Nailer fastener spacing shall be at 12 inches (0.3 m) on center or 16 inches (0.4 m) on center if necessary to match the structural framing. Fasteners shall be staggered 1/3 the nailer width and installed within 6 inches (0.15 m) of each end. Two fasteners shall be installed at ends of nailer lengths. Nailer attachment shall also meet the requirements of the current Factory Mutual Loss Prevention Data Sheet 1-49.
- C. Thickness shall be as required to match substrate or insulation height to allow a smooth transition.
- D. Any existing nailer woodwork which is to remain shall be firmly anchored in place to resist a minimum force of 300 pounds per lineal foot (4,500 Newtons per lineal meter) in any direction and shall be free of rot, excess moisture or deterioration. Only woodwork shown to be reused in Detail Drawings shall be left in place. All other nailer woodwork shall be removed.
- E. Stainless steel, corrosion resistant, fasteners are required when mechanically attaching any Sika Corporation product to wood nailers and wood products treated with ACQ (Alkaline copper Quaternary). When ACQ treated wood is used on steel roof decks or with metal edge detailing, a separation layer must be placed between the metal and ACQ treated wood.

3.06 INSULATION / ROOF BOARD INSTALLATION

General Criteria:

1. For Install tapered insulation in accordance with insulation manufacturer's shop drawings.
2. Insulation shall be installed according to insulation manufacturer's instructions.
3. Do not install more insulation board than can be covered with Sarnafil membrane by the end of the day or the onset of inclement weather.
4. Use at least 2 layers of insulation when the total insulation thickness exceeds 2-1/2 inches (64 mm). Stagger joints at least 12 inches (0.3 m) between layers.

Sarnacol 2163 Adhesive

All work surfaces should be clean, dry, free of dirt, dust, debris, oils and other contaminants that may result in a surface that is not sound or is uneven.

With a utility knife, cut away the plastic plugs from the Sarnacol 2163 mixing head. Attach a mixing tip to the threaded mixing head. Place the cartridge into the applicator. At the beginning of the tube, some of the material should be pumped out initially to make sure of a proper mix. Apply using a gravity fed applicator or by hand with a dual component caulk gun over properly installed and prepared substrates in bands of 1/4 to 1/2 inch (6 to 13 mm) wide before foaming. Adhesive will transform from a liquid into a low rise foam. Immediately set insulation boards into foamed adhesive. Do not allow the adhesive to skin over. Walk insulation boards into place to ensure full embedment. CAUTION: Walking insulation boards in immediately after placement into adhesive may cause slippage/movement until adhesive starts to set up. On roof slopes greater than 1/2 inch (13 mm) in 12 inches (305 mm), begin adhering insulation at low point and work upward to avoid slippage. One person should be designated to walk in, trim/slit and apply weight to all insulation boards to ensure adequate securement. Only areas that can be made completely watertight in the same day's operations shall be coated. Un-used adhesive can be applied at a later date by simply replacing the mixing tip.

Consult Product Data sheet for additional information on approved substrates, approved insulation or roof boards, and additional installation guidelines.

F. Sarnacol AD Board Adhesive

All work surfaces should be clean, dry, free of dirt, dust, debris, oils and other contaminants that may result in a surface that is not sound or is uneven.

Box Sets:

Install Part A and Part B components following instructions on the packaging. Always insure that the Part A and Part B containers are always hooked to the same dispensing holders or hoses (i.e. do not reverse the dispenser holders and hoses between Part A and Part B). All valves on the dispensing unit must be completely opened so a 1:1 ratio is achieved when moving the adhesive through the disposable mix tip and onto the substrate in a semi-liquid state. Apply the Sarnacol AD Board Adhesive directly to the substrate, using a ribbon pattern. Space the 1 in. (25 mm) wide beads at a maximum of 12 in. (30 cm) o.c. to achieve proper coverage rate. Actual ribbon spacing will depend on the wind uplift rating required. Allow the adhesive to begin to rise before placing the insulation or roof board into the adhesive. The adhesive is designed to provide approximately 5 - 10 minutes of open time during a typical summer day. CAUTION: Walking insulation boards in immediately after placement into adhesive may cause slippage/movement until adhesive starts to set up. On roof slopes greater than 1/2 inch (13 mm) in 12 inches (305 mm), begin adhering insulation at low point and work upward to avoid slippage. One person should be designated to walk in, trim/slit and apply weight to all insulation boards to ensure adequate securement. Only areas that can be made completely watertight in the same day's operations shall be coated.

Consult Product Data sheet for additional information on approved substrates, approved insulation or roof boards, and additional installation guidelines.

3.07 INSTALLATION OF SARNAFIL MEMBRANE

The surface of the insulation or substrate shall be inspected prior to installation of the Sarnafil roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination. Broken, delaminated, wet or damaged insulation boards shall be removed and replaced.

A. Sarnacol 2170 / 2170 VC Adhesive:

1. Over the properly installed and prepared substrate surface, adhesive shall be applied using solvent-resistant 3/4 inch (19 mm) nap paint rollers. The adhesive shall be applied to the substrate at a rate according to Sika Corporation requirements. The adhesive shall be applied in smooth, even coating with no gaps, globs, puddles or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be coated with adhesive. The first layer of adhesive shall be allowed to dry completely prior to installing the membrane.

2. When the adhesive on the substrate is dry, the Sarnafil roof membrane is unrolled. Adjacent sheets shall be overlapped 3 inches (75 mm). Once in place, one-half of the sheet's length shall be turned back and the underside shall be coated with adhesive at a rate of 1/2 gallon per 100 square feet (0.2 liters per m²). When the membrane adhesive has dried slightly to produce strings when touched with a dry finger, the coated membrane shall be rolled onto the previously-coated substrate being careful to avoid wrinkles. **Do not allow adhesive on the underside of the Sarnafil membrane to dry completely.** The amount of membrane that can be coated with adhesive before rolling into substrate will be determined by ambient temperature, humidity and crew. The bonded sheet shall be pressed firmly in place with a minimum 100 lb (45 kg) steel, membrane roller, by rolling in two directions.
3. The remaining un-bonded half of the sheet shall be folded back and the procedure repeated.

Notes:

- a) The Applicator shall count the amount of pails of adhesive used per area per day to verify conformance to the specified adhesive rate.
- b) Do not install when air temperature is within 5° of dew point. Solvent evaporation time increases significantly when temperatures drop.
- c) No adhesive shall be applied in seam areas. All membrane shall be applied in the same manner.

3.09 HOT-AIR WELDING OF SEAM OVERLAPS

A. General

1. All seams shall be hot-air welded. Seam overlaps should be 3 inches (76 mm) wide when automatic machine-welding and 4 inches (100 mm) wide when hand-welding, except for certain details.
2. Welding equipment shall be provided by or approved by Sika Corporation. All mechanics intending to use the equipment shall have successfully completed a training course provided by a Sika Corporation Technical Service Representative prior to welding.
3. All membrane to be welded shall be clean and dry.

B. Hand-Welding

Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.

1. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
2. The nozzle shall be inserted into the seam at a 45 degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow", the hand roller is positioned perpendicular to the nozzle and rolled lightly. For straight seams, the 1-1/2 inch (40 mm) wide nozzle is recommended for use. For corners and compound connections, the 3/4 inch (20 mm) wide nozzle shall be used.

C. Machine Welding

1. Machine welded seams are achieved by the use of Sika Corporation's automatic welding equipment. When using this equipment, Sika Corporation's instructions shall be followed and local codes for electric supply, grounding and over current protection observed. Dedicated circuit house power or a dedicated portable generator is recommended. No other equipment shall be operated simultaneously off the generator.
2. Metal tracks may be used over the deck membrane and under the machine welder to minimize or eliminate wrinkles.

D. Quality Control of Welded Seams

1. The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark gray material from the underside of the top membrane.

On-site evaluation of welded seams shall be made daily by the Applicator at locations as directed by the Owner's Representative or Sika Corporation's representative. One inch (25 mm) wide cross-section samples of welded seams shall be taken at least three times a day. Correct welds display failure from shearing of the membrane prior to separation of the weld. Each test cut shall be patched by the Applicator at no extra cost to the Owner.

3.10 MEMBRANE FLASHINGS

All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Approval shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing, the affected area shall be removed and replaced at the Applicator's expense. Flashing shall be adhered to compatible, dry, smooth, and solvent-resistant surfaces. Use caution to ensure adhesive fumes are not drawn into the building.

A. Sarnacol Adhesive for Membrane Flashings

1. Over the properly installed and prepared flashing substrate, the Sarnacol adhesive shall be applied in smooth, even coats with no gaps, globs or similar inconsistencies. Only an area which can be completely covered in the same day's operations shall be flashed. The bonded sheet shall be pressed firmly in place with a hand roller.
2. No adhesive shall be applied in seam areas that are to be welded. All panels of membrane shall be applied in the same manner, overlapping the edges of the panels as required by welding techniques.

B. Install Sarnastop/Sarnabar/Sarnacord according to the Detail Drawings with approved fasteners into the structural deck at the base of parapets, walls and curbs. Sarnastop is required by Sika Corporation at the base of all tapered edge strips and at transitions, peaks, and valleys according to Sika Corporation's details.

C. Sika Corporation's requirements and recommendations and the specifications shall be followed. All material submittals shall have been accepted by Sika Corporation prior to installation.

D. All flashings should extend a minimum of 8 inches (0.2 m) above roofing level, exceptions to this might be pipe boots and/or sealant pockets, etc. If in question, submit in writing to the Owner's Representative and Sika Corporation Technical Department for signed approval.

E. All flashing membranes shall be consistently adhered to substrates. All interior and exterior corners and miters shall be cut and hot-air welded into place. No bitumen shall be in contact with the Sarnafil membrane.

F. All flashing membranes shall be mechanically fastened along the counter-flashed top edge with Sarnastop at 6 to 8 inches (0.15 to 0.20 m) on center.

G. Sarnafil flashings shall be terminated according to Sika Corporation recommended details.

H. All adhered flashings that exceed 30 inches (0.75 m) in height shall receive additional securement. Consult Sika Corporation Technical Department for securement methods.

3.11 METAL FLASHINGS

A. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:

1. Factory Mutual Loss Prevention Data Sheet 1-49 (latest issue).
2. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - latest issue.

B. Metal, other than that provided by Sika Corporation, is not covered under the Sika Corporation warranty.

C. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.

- D. Metal shall be installed to provide adequate resistance to bending to allow for normal thermal expansion and contraction.
- E. Metal joints shall be watertight.
- F. Metal flashings shall be securely fastened into solid wood blocking. Fasteners shall penetrate the wood nailer a minimum of 1 inch (25 mm).
- G. Airtight and continuous metal hook strips are required behind metal fascias. Hook strips are to be fastened 12 inches (0.3 m) on center into the wood nailer or masonry wall.
- H. Counter flashings shall overlap base flashings at least 4 inches (100 mm).
- I. Hook strips shall extend past wood nailers over wall surfaces by 1-1/2 inch (38 mm) minimum and shall be securely sealed from air entry.

3.12 SARNACLAD METAL BASE FLASHINGS / EDGE METAL

All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Acceptance shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.

- A. Sarnaclad metal flashings shall be formed and installed per the Detail Drawings.
 - 1. All metal flashings shall be fastened into solid wood nailers with two rows of post galvanized flat head annular ring nails, 4 inches (100 mm) on center staggered. Fasteners shall penetrate the nailer a minimum of 1 inch (25 mm).
 - 2. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.
- B. Adjacent sheets of Sarnaclad shall be spaced 1/4 inch (6 mm) apart. The joint shall be covered with 2 inch (50 mm) wide aluminum tape. A 4 inch minimum (100 mm) wide strip of Sarnafil flashing membrane shall be hot-air welded over the joint. Exercise caution at perimeter of roof.

3.13 EDGE METAL

All flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner's Representative and Sika Corporation. Acceptance shall only be for specific locations on specific dates. If any water is allowed to enter under the newly completed roofing due to incomplete flashings, the affected area shall be removed and replaced at the Applicator's expense.

3.14 WALKWAY INSTALLATION

- A. Sarnatred-V

Roofing membrane to receive Sarnatred-V shall be clean and dry. Place chalk lines on deck sheet to indicate location of Sarnatred-V. Apply a continuous coat of Sarnacol 2170 or 2170 VC adhesive to the deck sheet and the back of Sarnatred-V in accordance with Sika Corporation's technical requirements and press Sarnatred-V into place with a minimum 100 lb (45 kg) steel, membrane roller, by rolling in two directions. Clean the deck membrane in areas to be welded. Hot-air weld the entire perimeter of the Sarnatred-V to the Sarnafil deck sheet. Check all welds with a rounded screwdriver. Re-weld any inconsistencies. **Important:** Check all existing membrane seams which are to be covered by Sarnatred-V with a rounded screwdriver and reweld any inconsistencies before installation. Do not run Sarnatred-V over Sarnabars.

3.15 TEMPORARY CUT-OFF

All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. All temporary waterstops shall be constructed to provide a 100 percent watertight seal. The stagger of the insulation joints shall be made even by installing partial panels of insulation. The new membrane shall be carried into the waterstop. Waterstop shall be sealed to the deck or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of sealant as described in Section 2.01. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed from the work area and properly disposed of off-site. None of these materials shall be used in the new work.

If inclement weather occurs while a temporary waterstop is in place, the Applicator shall provide the labor necessary to monitor the situation to maintain a watertight condition.

If any water is allowed to enter under the newly-completed roofing, the affected area shall be removed and replaced at the Applicator's expense.

3.16 COMPLETION

Prior to demobilization from the site, the work shall be reviewed by the Owner's Representative and the Applicator. All defects noted and non-compliances with the Specifications or the recommendations of Sika Corporation shall be itemized in a punch list. These items must be corrected immediately by the Applicator to the satisfaction of the Owner's Representative and Sika Corporation prior to demobilization.

All Warranties referenced in this Specification shall have been submitted and have been accepted at time of contract award.

3.17 DETAILS

Refer to Typical System Details section or usa.sarnafil.sika.com.

PROPOSAL

CITY HALL RE-ROOFING

BID NO. 2015/16-3230-00-009

BIDDER'S NAME: _____

ADDRESS: _____

PHONE NO: _____ FAX NO: _____

AUTHORIZED REPRESENTATIVE: _____

TITLE _____ SIGNATURE _____

RE-ROOFING *

\$ _____

***As per plans and specifications.**

ADD ALTERNATE 1:

**ENCAPSULATE PARAPET WALL WITH NEW ROOFING
SYSTEM AND INSTALL AN ALUMINUM COPING CAP
AROUND THE ENTIRE PERMIETER OF THE BUILDING
INCLUDING WOOD NAILERS**

\$ _____

Phase of Work

Days to Complete

Shop Drawings/Permitting

Mobilization

Demolition/remove existing roof system

Insulation

Dry in

Install Specified Roofing System

Install Lead and Metal Flashing/Coping

Final inspections/completion

Total Number of Days

INSURANCE REQUIREMENTS

See Insurance Check List for applicability to this contract.

The contractor shall be responsible for his work and every part thereof, for all materials, tools, appliances and property of every description, connection therewith. He shall specifically and distinctly assume, all risks of damage or injury to property or persons used or employee on or in connection with the work and of all damage or injury to any person property wherever located, resulting from any action or operation under contract or in connection with the work.

The contractor shall, during the continuance of the work under this contract including extra work in connection therewith:

Maintain Worker's Compensation and Employer's Liability Insurance to meet the statutory requirements of the State of Florida, to protect themselves from any liability or damage which may arise by virtue of any statute or law in force or which may hereafter be enacted.

Maintain General Liability Insurance in amounts prescribed by the City to protect the contractor in the interest of the City against all risks of injury to persons (including death) or damage to property wherever located resulting from any action or operation under the contract or in connection with the work.

Any additional coverage(s) required as indicated on Insurance Check List are part of this contract.

Maintain Automobile Liability Insurance including Property Damage covering all used or operated automobiles and equipment used in connection with the work.

All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida and these companies must have a rating of at least A:X or better per Best's Insurance Guide latest edition or its equivalent. There shall be attached an endorsement to save and hold harmless the City from any liability or damage whatsoever in accordance with the following form endorsement which forms a part of this contract.

When naming the City of Hialeah as an additional insured onto your policies, the insurance companies hereby agree and will endorse the policies to state that the City will not be liable for the payment of any premiums or assessments. An endorsement to the policy(ies) shall be issued accordingly and the certificate will state the above.

ENDORSEMENT

The insurance coverage shall extend to and include the following contractual indemnity and hold harmless agreement:

"The contractor hereby agrees to indemnify and hold harmless the City of Hialeah, a municipal corporation, its officers, agents, and employees from all claims for bodily injuries to the public in and up to the amount of \$1,000,000 for each occurrence and for all damages to the property of others in and up to the amount of \$1,000,000 for each occurrence with an aggregate of \$1,000,000 per the insurance requirement under the specifications including costs of investigation, all expenses of litigation, including reasonable attorney fees and the cost of appeals arising out of any such claims or suits because of any and all acts of omissions or commission of any by the contractor, his agents, servants, or employees, or through the mere existence of the project under contract.

The foregoing indemnity agreement shall apply to any and all claims and suits other than claims and suits arising out of the sole and exclusive negligence of the City of Hialeah, its officers, agents, and employees, as determined by court of competent jurisdiction. The contractor shall specifically and distinctly assume all responsibility for reporting any and all operations performed or to be performed under any existing contract made by or on behalf of the assured and the City of Hialeah.

It is understood and agreed that _____ (Firm Name) is at all times herein acting as an independent contractor.

Original, signed Certified Insurance Certificates evidencing such insurance and such endorsements as prescribed herein shall be filed by the contractor, before work is started, with the City of Hialeah. The certificate must state Bid Number and Title.

Products and Completed Operations Liability shall be provided for as stated in the Insurance Check List.

The contractor will secure and maintain policies of subcontractors. All policies shall be made available to the City upon demand.

No change or cancellation in insurance shall be made without thirty (30) days written notice to the City of Hialeah.

Insurance coverage required in these specifications shall be in force throughout the contract term. Should any awardee fail to provide acceptable evidence of current insurance within seven days of receipt of written notice at any time during the contract term, the City shall have the right to consider the contract breached and justifying the termination thereof.

Compliance by the Contractor and all subcontractors with the foregoing requirements as to carrying insurance and furnishing copies of the insurance policies shall not relieve the contractor and all subcontractors of their liabilities and obligations under this heading or under any other Section of Provisions of this contract.

The minimum limits of General Liability Insurance are prescribed as follows:

1. GENERAL LIABILITY

\$1,000,000 Combined Single Limit Bodily Injury and Property Damage each occurrence.

2. CONTRACTUAL LIABILITY

\$1,000,000 Combined Single Limit Bodily Injury and Property Damage each occurrence.

3. UMBRELLA EXCESS LIABILITY

(including Primary Coverage's)

The minimum limits of Automobile Liability Insurance are prescribed as follows:

\$100,000 for injury to one person \$50,000 per occurrence
\$300,000 per occurrence

The contractor shall take note of the Hold Harmless Agreement contained in this contract and will obtain and maintain contractual liability insurance in adequate limits for the sole purpose of protecting the City of Hialeah under the Hold Harmless Agreement from any and all claims arising out of this contractual operation.

Further, the contractor will notify his insurance agent without delay of the existence of the Hold Harmless Agreement contained within this contract, and furnish a copy of the Hold Harmless Agreement to the insurance agent.

The City shall be named as additional insured on the (Automobile and General Liability) policy(ies) with proof to be stated on the Certificates provided to the City and this coverage to be primary to all other coverage the City possess.

SUPERVISION

Contractual and any other Liability Insurance provided under this contract shall not contain a supervision, inspection, engineering services exclusion which would preclude the City from supervising and/or inspecting the project as to the end result. The Contractor shall assume all on the job responsibility as to the control of persons directly employed by him and of the subcontractor and persons employed by the subcontractor.

CONTRACTS

Nothing contained in the specifications shall be construed as creating any contractual relationship between any subcontractor and the City.

Contractor shall be as fully responsible to the City for the acts and omissions of the subcontractor and of persons employed by them, as he is, for acts and omissions of persons directly employed by him.

PROTECTION

Precaution shall be exercised at all times for the protection of persons, including employees and property. All existing structures, utilities, roads, services, trees, shrubbery, etc., shall be protected against damage or interrupted service at all times by the contractor during the term of the contract, and the contractor shall be held responsible for any damage to the property occurring by reason of his operation on the property.

INSURANCE EXCEPTION

If bidder does not meet the insurance requirements of the specification, alternate insurance coverage, satisfactory to the Risk Manager, may be considered.

An Owners Protective Policy in the name of the City of Hialeah shall designate this specific Contractor and identify this job at its location, and state by endorsement that this coverage is provided specifically for this job only. **LIMITS OF COVERAGE \$ 1,000,000.**

Property Damage Liability arising out of the collapse of or structural injury to any building or structure due to:

- a. Excavation (including burrowing, filling or back-filling in connection therewith), tunneling, pile driving, cofferdam work or caisson work, or;
- b. Moving, shoring, underpinning, raising or demolition of any building or structure, or removal or rebuilding of any structural support thereof.

Property Damage Liability for:

- a. Injury to or destruction of wires, conduits, pipes, mains, sewers to other similar property or any apparatus in connection therewith, below the surface of the ground arising from and during the use of mechanical equipment for the purpose of excavating or drilling in streets or highways or,
- b. Injury to or destruction of property at any time resulting therefrom. The term "streets" includes alleys. In determining where a street or highway ends, all of the lane up to privately owned land shall be considered a street.

Broad Form Property Damage Liability Coverage Including Completed Operations

The insurance for property damage liability applies, subject to the following additional provisions:

1. To property owned or occupied by or rented to the insured, or except with respect to the use of elevators, to property held by the insured for sale or entrusted to the insured for storage or safekeeping.
2. Except with respect a liability under a written sidetrack agreement or the use of elevators.
 - a. To property while on premises owned by or rented to the insured for the purpose of having operations performed on such property by or on behalf of the insured.
 - b. To tools or equipment while being used by the insured in performing his operations.
 - c. To property in the custody of the insured which is to be installed, erected or used in construction by the insured.
 - d. To that particular part of any property, not on premises owned by or rented to the insured.
 - (i) Upon which operations are being performed by or on behalf of the insured at the time of the property damage arising out of such operations or,
 - (ii) Out of which any property damage arises or,
 - (iii) The restoration, repair or replacement of which has been made or is necessary by reason of faulty workmanship thereon by or on behalf of the insured.
3. With respect to the completed operations hazard and with respect to any classification stated in the policy or in the company's manual as including completed operations.

To property damage by work performed by the name insured arising out of such work or any portion thereof, or out of such materials, part or equipment furnished in connection therewith.

The Broad Form Property Damage Liability Coverage shall be excess insurance over any valid and collectible property insurance (including any deductible portion thereof) available to the insured, such as, but not limited to Fire, Extended Coverage, Builder's Risk Coverage or Installation Risk Coverage and the other insurance condition of the policy is amended accordingly.

CROSS LIABILITY

It is understood and agreed that the inclusion of more than one insured under this policy shall not restrict the coverage provided by this policy for one insured hereunder with respect to a liability claim or suit by another insured hereunder or an employee of such other insured and that with respect to claims against any insured hereunder, other insurers hereunder shall be considered members of the public; but the provisions of this Cross Liability clause shall apply only with respect to liability arising out of the ownership, maintenance, use, occupancy or repair for such portions of the premises insured hereunder as are not reserved for the exclusive use of occupancy of the insured against whom claim is made or suit is filed.

CERTIFICATE OF INSURANCE

On an Accord Certificate of Insurance binder, on the Cancellation Clause, the following shall be deleted: The word "endeavor" as well as "...but failure to mail such notice shall impose no obligation or liability of any kind upon the company".

OUT-OF-STATE NON-RESIDENT AGENT

When a certificate is issued by an out-of-state non-resident agent with a "920" License, the name, address and telephone number of the Florida Resident Agent must be listed in the space provided on the checklist and on the Certificate of Insurance provided.

SMALL DEDUCTIBLE POLICIES

All policies issued to cover the insurance requirements herein shall provide full coverage from the first dollar of exposure. No deductibles will be allowed in any policies issued on this contract unless specific safeguards have been established to assure an adequate fund for payment of deductibles by the insured. These safeguards shall be in form of escrow accounts or other method established by the Risk Manager to safeguard to the City's interests and those interests of any claimants under the contractor's policies.

INSURANCE CHECK LIST

BID NO. 2015/16-3230-00-009

INSURANCE	LIMITS
<u> X </u> 1. WORKER'S COMPENSATION AND EMPLOYEES LIABILITY	STATUTORY LIMITS OF THE STATE OF FLORIDA.
<u> X </u> 2. GENERAL LIABILITY PREMISES OPERATIONS (M&C OR OL&T ARE REQUIRED) INCLUDED; PRODUCTS AND COMPLETED OPERATIONS INCLUDED; INDEPENDENT CONTRACTORS (O.C.P.) INCLUDED; ELEVATORS INCLUDED; SUPERVISION EXCLUSION DELETED; PERSONAL INJURY LIABILITY	<u>BODILY INJURY PROPERTY DAMAGE</u> \$1,000,000 SINGLE LIMIT BODILY INJURY AND PROPERTY DAMAGE COMBINED EACH OCCURRENCE.
<u> X </u> 3. BROAD FORM PROPERTY DAMAGE ENDORSEMENT	
<u> X </u> 4. CONTRACTUAL INDEMNITY/HOLD HARMLESS ENDORSEMENT EXACTLY AS WRITTEN IN "INSURANCE REQUIREMENTS" OF SPECIFICATIONS	\$1,000,000 SINGLE LIMIT BODILY INJURY & PROPERTY DAMAGE COMBINED EACH OCCURRENCE
<u> X </u> 5. AUTOMOBILE LIABILITY OWNED NON-OWNED/HIRED AUTOMOBILES INCLUDED	\$100/300,000 \$50,000 EACH OCCURRENCE
<u> </u> 6. UMBRELLA LIABILITY	\$1,000,000 INCLUDING PRIMARY COVERAGE
<u> </u> 7. GARAGE LIABILITY	\$100/300,000 \$50,000 EACH OCCURRENCE
<u> </u> 8. GARAGE KEEPER'S LEGAL LIABILITY	\$50,000 EACH OCCURRENCE
<u> X </u> 9. THE CITY MUST BE NAMED AS ADDITIONAL INSURED ON THE INSURANCE CERTIFICATE <u>AND THE FOLLOWING MUST ALSO BE STATED ON THE CERTIFICATE.</u> "THESE COVERAGES ARE PRIMARY TO <i>ALL</i> OTHER COVERAGES THE CITY POSSESSES FOR THIS CONTRACT ONLY."	
<u> </u> 10. TEACHERS PROFESSIONAL LIABILITY	\$100/300,000 \$50,000 EACH OCCURRENCE
<u> </u> 11. DRAM SHOP EXCLUSION DELETED AND LIQUOR LIABILITY WILL BE PROVIDED	
<u> </u> 12. CROSS LIABILITY OR SEVERABILITY OF INTERESTS CLAUSE ENDORSEMENT	

- _____ 13. XCU PROPERTY DAMAGE EXCLUSION DELETED AND THIS COVERAGE WILL BE PROVIDED
- _____ 14. FIRE LEGAL LIABILITY
- _____ 15. OTHER INSURANCE AS INDICATED BELOW:
Builders Risk Complete Value Policy
- X 16. THIRTY (30) DAYS CANCELLATION NOTICE REQUIRED
- X 17. BEST'S GUIDE RATING A:X OR BETTER OR ITS EQUIVALENT
- X 18. THE CERTIFICATE MUST STATE THE BID NUMBER AND TITLE
- X 19. "WHEN USING THE "ACCORD" FORM OF INSURANCE CERTIFICATE, PLEASE NOTE THAT UNDER THE CANCELLATION CLAUSE, THE FOLLOWING MUST BE DELETED. "ENDEAVOR TO" AND "BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY".

We understand the Insurance Requirements of these specification and that evidence of insurability may be required within five (5) days after bid opening.

Insurance Agency

Signature of Bidder's Agent

Agent's Errors and Omissions Policy:

	Policy Company	Expiration Amount of
Number	Date	Coverage

ASSIGNMENT

For, and in recognition of, good and valuable considerations, receipt of which is hereby acknowledged, _____,

Company Name

acting herein by and through _____,

Individual Name

its _____ and duly authorized agent,
Title of Individual's Position

hereby conveys, sells, assigns and transfers to the City of Hialeah, Florida all rights, title and interest in and to all cause of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Florida for price fixing, relating to the particular goods or services purchased or acquired by the City of Hialeah, Florida pursuant to _____

Identity of City Contract

Date

Name

Signature

Title

Name of Company

STATEMENT OF BIDDER'S QUALIFICATIONS

In order to assist the City of Hialeah in determining whether the Bidder is qualified to do the work set forth in the Bid Proposal, he shall furnish hereunder a list of references who are qualified to judge as to his financial responsibility and his experience in work of a similar nature upon which he is bidding.

The Bidder shall list the facilities or equipment that is available for use in case his bid is accepted.

The Bidder shall list the full names and residences of person and firms interested in the foregoing bid, as principals.

The Bidder shall list the name of the executive who will give personal attention to the work.

The Bidder shall list a record of his previous contracting experience.

The Bidder shall list the names and addresses of his subcontractors.

END OF STATEMENT OF BIDDER'S QUALIFICATIONS

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____)

_____, being first duly sworn,
deposes and says that:

- (1) He is _____ of _____, the Bidder that has submitted the attached Bid:
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bidder nor any of its officers, partner, own agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed directly or indirectly with any other Bidder, firm or person to sub a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person, or to fix any overhead, profit or cost element of the Bid price or the Bid price any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the **City of Hialeah** (Local Public Agency) or any person interested in the proposed Contract; and

The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Name) _____

Subscribed and sworn to before me

(Title)

This ____ day of _____, 200 ____

Title _____

(Title)

My commission expires _____

**PURCHASING DIVISION
CITY OF HIALEAH DISCLOSURE AFFIDAVIT**

I _____ being first duly sworn, state:

The full legal name and business address* of the person or entity contracting or transacting business with the City of Hialeah are:

Phone Number: _____ Fax Number: _____

If the contract or business transaction is with a corporation, the full legal name and business address* shall be provided for each officer and director and each stockholder who holds directly or indirectly five percent (5%) or more of the corporation's stock. If the contract or business transaction is with a partnership, the full legal name and business address* shall be provided for each partner. If the contract or business transaction is with a trust, the full legal name and address* shall be provided for each trustee and each beneficiary. All such names and addresses are:

The full legal names and business address* of any other individual (other) than subcontractors, material men, suppliers, laborers, or lenders who have, or will have, any interest (legal, equitable beneficial or otherwise) in the contract or business transaction with the City of Hialeah are:

Tax ID Number (F.E.I.N) or Social Security Number: _____ - _____

PROOF OF CORPORATE STATUS

Please provide proof of corporate status. All vendors and bidders must be an active corporation in good standing in the State of Florida or any other State. If incorporated in a State other than Florida, then please provide proof that the corporation is registered to do business in the State of Florida in addition to proof of active corporate status. If incorporated in Florida, a computer print-out from the Department of State will be sufficient proof of corporate status. This requirement also applies to limited liability companies, partnerships, limited partnerships, joint-ventures, etc.

LEGAL SIGNATURE OF AFFIANT

(Print or Type Legal Name of Affiant)

Sworn to and subscribed before me this _____ day of _____, _____

Notary Public - State of: _____

My Commission Expires: _____

Print/Type and Stamp commissioned name of Notary Public

NOTARY SEAL

Personally known ___ or Produced Identification ___

Type of Identification Produced _____

****Post office box addresses are not acceptable.**

SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____
(print name of the public entity)
by _____
(print individual's name and title)
for _____
(print name of entity submitting sworn statement)

whose business address is _____

and (if applicable) its Federal Employer Identification Number (FEIN) is _____

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: _____.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1) (g), **Florida Statutes**, means a violation of any state or federal law by a person with respect to an directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1) (b), **Florida Statutes**, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non jury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133 (1) (a), **Florida Statutes**, means:
1. A predecessor or successor of a person convicted of a public entity crime; or
 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.
5. I understand that a "person" as defined in Paragraph 287.133 (1) (e) **Florida Statutes**, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (indicate which statement applies.)

____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administration Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place submitting this sworn statement on the convicted vendor list. (attach a copy of the final order)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(signature)

Sworn to and subscribed before me this _____ day of _____, 200_____.

Personally known _____

OR Produced Identification _____

(Type of identification)

Notary Public - State of _____

(Printed typed or stamped
commissioned name of notary public)